

MEMORANDUM

TO: **FILE – WASATCH ENERGY SYSTEMS**

THROUGH: Jeff Dean, Compliance Manager

FROM: Jay Morris, Environmental Scientist

DATE: February 6, 2003

SUBJECT: **WASATCH ENERGY SYSTEMS**, A, NA, NSPS, TITLE V, Davis County,
AIRS #01100033

TYPE OF INSPECTION: Annual – partial inspection

DATE OF INSPECTION: January 29, 2003

MULTIPLE INSPECTION SOURCE: Yes. This was inspection 1 of 2

FFY QUARTER ASSIGNED: 2nd quarter FFY 2003

SOURCE LOCATION: 3404 North 650 East, Layton

SOURCE CONTACT: Preston Lee, Environmental Engineer
Nathan Rich, Executive Director

OPERATING STATUS: Operating

PROCESS DESCRIPTION:

Davis County Energy operates a 420 ton per day municipal waste combustor and an enclosed flare system to dispose of gasses collected from the Davis County Landfill.

The municipal waste combustor (MWC) creates electricity and steam by burning solid municipal waste from Davis County residents and businesses. Trucks unload municipal and industrial waste in an enclosed pit. The waste is then loaded into hoppers using a crane that is equipped with orange peel type fingers to pick up the waste. The cranes transport the waste from the pit to the feed hoppers on the incinerators. At the lower portion of the hopper, a chute is formed which feeds the waste to the grate in the furnaces.

The MWC has two refractory wall Seghers furnaces and Zurn waterwall waste heat recovery steam generators. The furnace/steam generator units are designed to incinerate 210 tons/ day of waste each and produce a combined total of 51,344 lb/hr of 500 degree F, 500 psig steam. In the furnace, the waste is pushed down a series of 13 stepped grates by a sliding action of the steps (combination rocking and sliding grate). The waste is tumbled and mixed as it falls from one step to the next. Combustion air is

drawn from the refuse pit or from inside the plant and is forced under the stepped grates, up through the burning waste (under fire air). Additional combustion air is injected through ports on the sides of the furnace above the grate level when needed (over fire air). The walls of the furnace are constructed of air cooled refractory. At the end of the grate system, all remaining ash is dropped into the water filled ash pit and is then pushed to the solid ash collection pit by hydraulic rams.

The heat produced by the MWC is exhausted through the boilers and economizer. The steam from the boilers is sent to Hill Air Force Base and is used to heat several buildings during the winter. When the steam demand is low, the steam is sent to a cooling tower and transformed back in to water. The water from the cooling tower is then used as make up water in the boilers. The steam from the boiler is also used to operate a turbine that provides power to the entire facility. Any excess power produced by the turbine is sold to Utah Power and Light.

After the exhaust stream passes through the boilers, it is quenched with a water/lime slurry to reduce the temperature and volume and to control acid gasses in the gas suspension absorber tower (GSA). A carbon injection system is also used to reduce dioxin/furan and metals emissions. After the GSA, the exhaust stream enters a cyclone. The carbon and lime particles are removed in the cyclone and are re-injected into the exhaust stream inside of the GSA. The exhaust gasses are vented through the cyclone and into an electrostatic precipitator for additional controls. After the electrostatic precipitators, the exhaust stream is vented to the atmosphere through a 140 foot tall stack.

The electrostatic precipitators drop the collected particulate (fly ash) into hoppers. The hoppers are equipped with a screw type feeder that transports the fly ash to the ash pit. In the ash pit, the fly ash from the electrostatic precipitators is mixed with the bottom ash from the incinerators. After mixing, the ash is loaded into haul trucks using a clam shell crane and is then transported to the landfill for disposal.

The landfill consists of two cells. These cells have been covered and a gas collection system is installed. The collected gasses are piped to a 32.8 MMBtu/hr fully enclosed flare for incineration. The flare operates at a temperature of 1800 ° F to ensure complete destruction of all collected gasses. The exhaust from the flare is vented through a 40 foot tall stack.

APPLICABLE
REGULATIONS:

Title V Operating Permit # 1100033001 Dated October 29, 2002

SOURCE INSPECTION
EVALUATION:

Title V Operating Permit

PERMIT NUMBER: 1100033001

DATE OF PERMIT: October 29, 2002

Date of Last Revision: October 29, 2002

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Wasatch Energy Systems
650 E Hwy 193
Layton, UT 84041

Permitted Location:

Energy Recovery Facility

3404 North 650 East
Layton, UT 84041

Landfill

1150 E. North Hills Dr.
Layton, UT 84041

Energy Recovery Facility

UTM coordinates: 4,551,230 meters Northing, 419,830 meters Easting

Landfill

UTM coordinates: 4,550,700 meters Northing, 421,500 meters Easting

SIC code: 4953

ABSTRACT

Wasatch Energy Systems (WES) operates a municipal waste landfill and two 210 ton per day (tpd) municipal waste combustors (MWCs). The MWCs export steam to Hill Air Force Base and use a back pressure turbine to generate electricity for onsite use and sale to the grid. Acid gases, mercury, and dioxin/furan are controlled by injecting hydrated lime and activated carbon in a gas suspension absorber (GSA). Particulate emissions are controlled by a three-field electrostatic precipitator (ESP). The source is subject to the state plan and rule for municipal waste landfills (i.e., R307-220-2 and R307-221) and the state plan and rule for MWCs (i.e., R307-220-4 and R307-223). WES is a major source for nitrogen oxides (NO_x) and hydrogen chloride (HCl).

UTAH AIR QUALITY BOARD

By:

Prepared By:

Richard W. Sprott, Executive Secretary

Dave Hansell

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

Section I: General Provisions

I.A. Federal Enforcement.

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

Status. In compliance.

I.B. Permitted Activity(ies).

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

Status. In compliance. See conditions below for specific compliance determinations.

I.C. Duty to Comply.

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

Status. In compliance. WES appeared to be complying with the conditions of this permit at the time of inspection. All information and records requested during the inspection were provided on site.

I.D. Permit Expiration and Renewal.

I.D.1 This permit is issued for a fixed term of five years and expires on October 29, 2007.
(R307-415-6a(2))

I.D.2 Application for renewal of this permit is due by April 29, 2007. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

Status. Compliance cannot be determined until April 29, 2007.

I.E. Application Shield.

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

Status. Compliance cannot be determined until April 29, 2007.

I.F. Severability.

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

Status. In compliance. No portions of this permit have been challenged by the company.

I.G. Permit Fee.

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

Status. In compliance. Annual emission fees are paid as required.

I.H. No Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

Status. In compliance.

I.I. Revision Exception.

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

Status. In compliance.

I.J. Inspection and Entry.

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

Status. In compliance. The inspector was provided access to the facility and all records required to determine compliance.

I.K. Certification.

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

Status. In compliance. WES has submitted this certification statement for all correspondence related to this Title V permit.

I.L. Compliance Certification.

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than **October 28, 2003** and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

- I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.
- I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
EPA, Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

Status. Compliance cannot be determined. WES has not yet submitted an annual compliance certification. This certification will be submitted in July of each year so the company can report consistently with other annual reporting requirements that are not part of the Title V permit.

I.M. Permit Shield.

- I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:
- I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))
- I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))
- I.M.2 Nothing in this permit shall alter or affect any of the following:
- I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))
- I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))
- I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))
- I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

Status. In compliance. All applicable requirements that are currently enforceable are included in this permit.

I.N. Emergency Provision.

- I.N.1 An “emergency” is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))
- I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))
- I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))
- I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))
- I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))
- I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))
- I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

Status. In compliance. WES has reported one emergency event that occurred on February 2, 2003. WES notified the executive secretary on February 3, 2003. The cause of the problem was a weather related power outage. The facility was being properly operated at the time and operators took all possible steps to minimize emissions.

I.O. Operational Flexibility.

Operational flexibility is governed by R307-415-7d(1).

Status. In compliance.

I.P. Off-permit Changes.

Off-permit changes are governed by R307-415-7d(2).

Status. In compliance.

I.Q. Administrative Permit Amendments.

Administrative permit amendments are governed by R307-415-7e.

Status. In compliance.

I.R. Permit Modifications.

Permit modifications are governed by R307-415-7f.

Status. In compliance.

I.S. Records and Reporting.

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

- I.S.1.b.4 The analytical techniques or methods used.
- I.S.1.b.5 The results of such analyses.
- I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.
- I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.
- I.S.2 Reports.
- I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))
- I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i))
- I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used in this condition, shall be defined as written notification within 7 days.** Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))
- I.S.3 Notification Addresses.
- I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:
- Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000
- I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications

Environmental Protection Agency, Region VIII

For reports, notifications, or other correspondence
related to permit modifications, applications, etc.

Environmental Protection Agency, Region VIII

Office of Enforcement, Compliance and
Environmental Justice (mail code 8ENF)
999 18th Street, Suite 300
Denver, CO 80202-2466

Office of Partnerships & Regulatory Assistance
Air & Radiation Program (mail code 8P-AR)
999 18th Street, Suite 300
Denver, CO 80202-2466
Phone: 303-312-6440

Status. In compliance. Records of monitoring data included all information required in condition 1.S.b 1-6 above. All records listed in Section II were observed during the inspection and appeared to be complete. On January 29, 2003, WES submitted the first six month monitoring report and their annual report due on February 1 of each year. The certification statement listed in I.K above was included on all reports. Copies of these reports are in the company's source compliance file. In the future, WES plans to submit the annual and semi annual reports on a January – July schedule to correspond with other reports required by the facility.

I.T. Reopening for Cause.

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

Status. In compliance. This permit has not been reopened since it was issued in October 2002.

I.U. Inventory Requirements.

- I.U.1 An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)
- I.U.2 A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)
- I.U.3 An emission statement shall be submitted in accordance with the procedures in R307-158, Emission Statement Inventory. (R307-158)

Status. In compliance. Emission inventory information is submitted as required.

Section II: SPECIAL PROVISIONS

II.A. Emission Unit(s) Permitted to Discharge Air Contaminants.

(R307-415-4(3)(a) and R307-415-4(4))

- II.A.1 **Municipal Waste Combustion Facility** (designated as MWCF-0)
Unit Description: Up to 140,000 tons per year of municipal waste are combusted in the municipal waste combustion facility (MWCF). Ash from the MWCF is delivered to the landfill. The MWCF includes emission units MWCF-1 through 8.
- II.A.2 **Municipal Waste Combustor 1** (designated as MWCF-1)
Unit Description: Mass burn refractory wall combustor rated at 210 tons per day equipped with a 30 MMBtu/hr oil- or natural gas-fired auxiliary burner, waste heat recovery boiler, gas suspension absorber, electrostatic precipitator, and carbon and hydrated lime injection.
- II.A.3 **Municipal Waste Combustor 2** (designated as MWCF-2)
Unit Description: Mass burn refractory wall combustor rated at 210 tons per day equipped with a 30 MMBtu/hr oil- or natural gas-fired auxiliary burner, waste heat recovery boiler, gas suspension absorber, electrostatic precipitator, and carbon and hydrated lime injection.
- II.A.4 **Diesel-Fired Pump** (designated as MWCF-3)
Unit Description: One diesel-fired pump rated at 231 hp.
- II.A.5 **Activated Carbon Storage Silo** (designated as MWCF-4)
Unit Description: One activated carbon storage silo with two delivery and injection systems. No unit-specific applicable requirements.
- II.A.6 **Hydrated Lime Storage Silo** (designated as MWCF-5)
Unit Description: One bulk hydrated lime storage silo and two delivery systems. No unit-specific applicable requirements.
- II.A.7 **Cold Cleaning Unit** (designated as MWCF-6)
Unit Description: One cold solvent cleaning unit.

- II.A.8 **Ash Handling Building** (designated as MWCF-7)
Unit Description: Ash produced by the municipal waste combustors is handled wet, inside an ash handling building and hauled to the landfill in covered trucks. No unit-specific applicable requirements.
- II.A.9 **Tipping Hall** (designated as MWCF-8)
Unit Description: Municipal waste is delivered by truck to the tipping hall. The tipping hall is enclosed except for the delivery entrance. No unit-specific applicable requirements.
- II.A.10 **Landfill** (designated as LNF-0)
Unit Description: The landfill is used for disposal of municipal solid waste (MSW), construction and demolition waste, and ash from the municipal waste combustion facility (MWCF-0). The landfill includes emission units LNF-1 through 6.
- II.A.11 **Landfill Cell 1** (designated as LNF-1)
Unit Description: One of two cells located at the landfill. This unlined cell began accepting waste in the 1950s and closed in 2000. Includes three passive landfill gas vents.
- II.A.12 **Landfill Cell 2** (designated as LNF-2)
Unit Description: One of two cells located at the landfill. This lined cell began accepting waste in August of 1998.
- II.A.13 **LPG-Fired Heaters** (designated as LNF-3)
Unit Description: Liquid propane-fired comfort heaters rated at less than 5 MMBtu/hr. No unit-specific applicable requirements.
- II.A.14 **Diesel-Fired Internal Combustion Engines** (designated as LNF-4)
Unit Description: Four stationary diesel-fired internal combustion engines rated at 5, 15, 30, and 300 hp.
- II.A.15 **Cold Cleaning Unit** (designated as LNF-5)
Unit Description: One cold solvent cleaning unit.
- II.A.16 **Landfill Gas-Collection and Control System** (designated as LNF-6)
Unit Description: Landfill gas-collection system for cells 1 and 2 rated at 1200 scfm. The collection system is controlled by a fully enclosed flare rated at 32.8 MMBtu/hr.

Status. In compliance. The above equipment list was consistent with the equipment located on site. WES plans to replace the 300 hp diesel engine listed in II.A.14 with a larger diesel engine. The facility will soon be submitting an NOI to make this change and to increase the hours of operation for this same engine.

II.B. **Requirements and limitations.**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

II.B.1 **Conditions on permitted source (Source-wide)**

II.B.1.a **Condition:**

Sulfur content of any oil combusted shall be no greater than 0.5 percent by weight. [Authority granted under R307-401(6) [BACT]; condition originated in DAQE-AN0129010-02]

II.B.1.a.1 **Monitoring:**

For each delivery of oil, the permittee shall either:

(1) Determine the fuel sulfur content expressed as wt% in accordance with the methods of the American Society for Testing Materials (ASTM);

(2) Inspect the fuel sulfur content expressed as wt% determined by the vendor using methods of the ASTM; or

(3) Inspect documentation provided by the vendor that indirectly demonstrates compliance with this provision.

II.B.1.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status. In compliance. Fuel oil deliveries are made by Phillips 66. All fuel purchased is #2 diesel. Each load of fuel is delivered with documentation from Phillips 66 that lists the sulfur content of the product. The sulfur content for the last delivery was 0.047% by weight. Records of fuel analysis conducted by Phillips 66 are kept in a record book on site.

II.B.1.b **Condition:**

The permittee shall ensure that the following conditions are met:

(1) Each solvent degreaser is equipped with a cover which shall remain closed except during actual loading, unloading or handling of parts in cleaner. The cover shall be designed so that it can be easily operated with one hand if

(a) the volatility of the solvent is greater than 2 kPa (15 mm Hg or 0.3 psi) measured at 38 degrees C (100 degrees F),

(b) the solvent is agitated, or

(c) the solvent is heated.

(2) An internal draining rack for cleaned parts shall be installed on which parts shall be drained until all dripping ceases. If the volatility of the solvent is greater than 4.3 kPa (32 mm Hg at 38 degrees C (100 degrees F)), the

drainage facility must be internal, so that parts are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Waste or used solvent shall be stored in covered containers. Waste solvents or waste materials which contain solvents shall be disposed of by recycling, reclaiming, by incineration in an incinerator approved to process hazardous materials, or by an alternate means approved by the executive secretary.

(4) Tanks, containers and all associated equipment shall be maintained in good operating condition and leaks shall be repaired immediately or the degreaser shall be shutdown.

(5) Written procedures for the operation and maintenance of the degreasing or solvent cleaning equipment shall be permanently posted in an accessible and conspicuous location near the equipment.

(6) If the solvent volatility is greater than 4.3 kPa (33 mm Hg or 0.6 psi) measured at 38 degrees C (100 degrees F), or if solvent is heated above 50 degrees C (120 degrees F), then one of the following control devices shall be used:

- (a) freeboard that gives a freeboard ratio greater than 0.7;
- (b) water cover if the solvent is insoluble in and heavier than water;
- (c) other systems of equivalent control, such as a refrigerated chiller or carbon absorption.

(7) If used, the solvent spray shall be a solid fluid stream at a pressure which does not cause excessive splashing and may not be a fine, atomized or shower type spray. [Authority granted under R307-335-2; condition originated in R307-335] **Reviewer comment: Applies to cold cleaning units MWCF-6 and LNF-5.**

II.B.1.b.1

Monitoring:

A visual observation shall be conducted monthly for all equipment and applicable work practices.

II.B.1.b.2

Recordkeeping:

Results of monthly inspections and the volatility of the solvent(s) being used shall be recorded and maintained as described in Provision I.S.1 of this permit.

II.B.1.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. WES has 2 solvent degreasers this condition applies to. Both units are identical. One unit is at the MWC facility and one is at the landfill. Each unit is equipped with a cover that remains closed at all times and is easily operated with one hand. The solvent is stored in a tank beneath the degreaser unit and all used solvent is drained back into this storage tank. Solvent is pumped from the storage tank into the degreaser when needed. The solvent currently in use is Safety Kleen Premium Gold

Solvent. Written instructions are posted near each unit, along with the MSDS sheets. Records of monthly visual observations are kept in a record book and were reviewed on site.

II.B.1.c

Condition:

Records shall be maintained of the material (salt, crushed slag, or sand) applied to the roads. [Authority granted under R307-307; condition originated in R307-307]

II.B.1.c.1

Monitoring:

Records required for this permit condition will serve as monitoring.

II.B.1.c.2

Recordkeeping:

The following records shall be maintained as outlined in Provision I.S.1 of this permit:

For Salt - the quantity applied, the percent by weight of insoluble solids in the salt, and the percentage of the material that is sodium chloride (NaCl).

For Sand or Crushed Slag - the quantity applied and the percent by weight of fine material which passes the number 200 sieve in a standard gradation analysis. (origin: R307-307)

II.B.1.c.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. Records of materials applied to the road are kept in a record book and were reviewed during this inspection. Salt and sand are both loaded into a truck using a front end loader. Each truck has only been loaded once since this permit was issued and the facility had not used all of the product in the trucks at the time of inspection. WES keeps records of the amount of materials by keeping track of how many loader buckets were dumped into the haul trucks and calculating the quantity of each loader bucket.

Three bucket loads of salt were loaded into the haul truck. Laboratory tests on the salt indicated 36% by weight insoluble solids. 60% of the material was NaCl. Three bucket loads of sand were loaded into the sand haul truck. Laboratory tests on the sand indicated 2% by weight of fine material in the standard gradation analysis. All laboratory tests were conducted on December 4, 2002. Copies of the lab results were in the company's record books and were reviewed during the inspection.

II.B.1.d

Condition:

Visible emissions caused by fugitive dust shall not exceed 10% at the property boundary, and 20% onsite except during periods when wind speeds exceed 25

miles per hour and control measures in the most recently approved fugitive dust control plan are being taken. [Authority granted under R307-309-3(1) & R307-309-4(3); condition originated in DAQE-AN0129010-02]

II.B.1.d.1

Monitoring:

In lieu of monitoring via visible emissions observations, adherence to the most recently approved fugitive dust control plan shall be monitored to demonstrate that appropriate measures are being implemented to control fugitive dust.

II.B.1.d.2

Recordkeeping:

Records of measures taken to control fugitive dust shall be maintained to demonstrate adherence to the most recently approved fugitive dust control plan. If wind speeds are measured to establish an exception from the above visible emissions limits, records of those measurements shall be maintained. Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.1.d.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. WES was operating in accordance with their fugitive dust control plan. The plan was submitted on November 13, 2001, and was approved in a memo dated December 3, 2001 (DAQC-1843-2001). A copy of the plan and approval letter is in the fugitive dust control plan file. Watering records are maintained for compliance purposes.

II.B.1.e

Condition:

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected emission unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5 and 40 CFR 60.11(d); condition originated in DAQE-AN0129010-02]

II.B.1.e.1

Monitoring:

Records required for this permit condition will serve as monitoring.

II.B.1.e.2

Recordkeeping:

Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.e.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. The facility appeared to be operating in accordance with good air pollution control practices. All records required by this permit are updated and reviewed as required. A monthly report (MP 2) of all operating activities is generated electronically. This program tracks all work orders and maintenance activities for the month.

II.B.2

Conditions on Municipal Waste Combustion Facility (MWCF-0)

II.B.2.a

Condition:

Combined hours of operation shall be no greater than 16,300 hours per rolling 12 month period . Unit hours shall be determined as each hour or part of the hour in which a feed chute door is open and MW is combusted. [Authority granted under R307-401(6) [BACT]; condition originated in DAQE-AN0129010-02]

II.B.2.a.1

Monitoring:

By the 15th day of each month, the permittee shall calculate the total hours of operation in the previous 12 months for the affected emission units. Hours of operation for each affected emission unit shall be determined by an hour meter and/or a log.

II.B.2.a.2

Recordkeeping:

Records of monitoring shall be kept on a daily basis during operations. Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.a.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. Combined hours of operation were 16,007 hours during the previous 12 month period of January 1, 2002, through December 31, 2002. Each unit is equipped with an hour meter and daily operating records are maintained in both an operators log book and electronically.

II.B.2.b

Condition:

Combined weight of municipal solid waste combusted shall be no greater than 140,000 tons per rolling 12-month period. [Authority granted under R307-401(6) [BACT]; condition originated in DAQE-AN0129010-02]

II.B.2.b.1

Monitoring:

The permittee shall weigh each load of waste delivered to the tipping hall. The permittee shall either weigh each load or assume a weight of 475 pounds per load for each load of waste delivered to the citizens drop off area. By the 15th day of each month, the permittee shall calculate the total weight of waste fed to the affected emission units for the previous 12 months.

II.B.2.b.2

Recordkeeping:

Records of monitoring shall be kept on a daily basis during operations. Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. Combined weight of MSW combusted was 112,455 tons during the previous 12 month period of January 1, 2002, through December 31, 2002. Each load of waste is weighed by the crane when lifted from the tipping floor. The weight is automatically recorded if the load of waste is delivered to the feed chute of the MWC. The automated control room computer system records the weight and combines all loads for daily totals on each unit.

II.B.2.c

Condition:

No. 2 fuel oil consumption shall be no greater than 60,000 gallons per 12-month rolling total in the municipal waste combustor fuel oil burners. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-AN0129010-02]

II.B.2.c.1

Monitoring:

By the 15th day of each month, the permittee shall calculate the total volume of fuel consumed in the previous 12 months. Fuel consumption for each affected emission unit shall be determined by a fuel meter.

II.B.2.c.2

Recordkeeping:

Records of monitoring shall be kept on a daily basis during operations. Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.c.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status. In compliance. Number 2 fuel oil consumption was 44,517 gallons during the previous 12 month period of January 1, 2002, through December 31, 2002. Fuel consumption is determined by a fuel meter. Fuel usage is recorded in the daily log book.

II.B.2.d Condition:

No fuel other than municipal solid waste, No. 2 fuel oil, or natural gas shall be burned in the municipal waste combustors. Municipal solid waste shall be as defined in R307-223 and does not include hazardous waste, radioactive waste, and all wastes included in Section 2.2 of EPA Guide for Infectious Waste Management [EPA/530-SW-860014, May 1986]. [Authority granted under R307- 401-6(1) [BACT]; condition originated in DAQE-AN0129010-02]

II.B.2.d.1 Monitoring:

The permittee shall visually inspect at least one percent of the loads of waste delivered to the tipping hall per year to verify that no waste other than municipal solid waste is present and that the waste does not contain hazardous waste, radioactive waste, and all wastes included in Section 2.2 of EPA Guide for Infectious Waste Management. Each inspection will be conducted by visually observing a load of waste which has been dumped onto the tipping hall floor. The permittee shall also review fuel purchase records at least once per month to ensure that only natural gas or No. 2 fuel oil is burned in the auxiliary fuel burns.

II.B.2.d.2 Recordkeeping:

A log of the visual inspections shall be maintained in accordance with Provision I.S.1 of this permit, including the date and time of each inspection and the name of the person making the inspection.

II.B.2.d.3 Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status. In compliance. Municipal solid waste is the primary fuel for the combustors. Number 2 diesel fuel is the only fuel oil purchased for this facility. WES inspects loads of waste delivered to the tipping hall 3 times each day. Written records of these inspections were reviewed during the inspection. Fuel purchase records are reviewed one time each month.

II.B.2.e Condition:

- (a) The permittee shall develop a specific operating manual for the municipal waste combustion facility.
- (1) Prior to one year after the EPA's approval of the State Plan for existing small municipal waste combustion units (see R307-220-4),

the operating manual shall include at least: *[R307-401-6(1)[BACT], DAQE-AN0129010-02]*

- (i) A summary of applicable regulatory standards and permit restrictions;
 - (ii) A description of the basic combustion theory applicable to the municipal waste combustion units;
 - (iii) Procedures for receiving, handling and feeding municipal solid waste at the municipal waste combustion units;
 - (iv) Start-up, shutdown and malfunction procedures including the proper use of the 30 million Btu/hr fossil fuel fired combustion chamber preheat burners before waste is introduced into the incinerator;
 - (v) Procedures to maintain proper combustion air supply levels;
 - (vi) Procedures for operating the facility within regulatory limits;
 - (vii) Procedures for responding to periodic upset or off-specification conditions;
 - (viii) Procedures for minimizing particulate matter carryover;
 - (ix) Procedures for handling ash;
 - (x) Procedures for monitoring and testing emissions including plant data to be recorded and provided by the plant as a supplement to an emissions test contractor's report; and
 - (xi) Reporting and record keeping requirements.
- (2) By one year after the EPA's approval of the State Plan for existing small municipal waste combustion units (see R307-220-4), the operating manual shall include: *[40 CFR 60.1665, R307-220-4]*
- (i) A summary of all applicable requirements in the State Plan for Small Municipal Waste Combustion Units (R307-220-4);
 - (ii) A description of the basic combustion principles that apply to municipal waste combustion units;
 - (iii) Procedures for receiving, handling, and feeding municipal solid waste;
 - (iv) Procedures to be followed during periods of startup, shutdown, and malfunction of the municipal waste combustion unit;
 - (v) Procedures for maintaining a proper level of combustion air supply;
 - (vi) Procedures for operating the municipal waste combustion unit in compliance with the requirements contained in State Plan for Small Municipal Waste Combustion Units (R307-220-4);
 - (vii) Procedures for responding to periodic upset or off-specification conditions;
 - (viii) Procedures for minimizing carryover of particulate matter.
 - (ix) Procedures for handling ash;
 - (x) Procedures for monitoring emissions from the municipal waste combustion unit; and
 - (xi) Procedures for recordkeeping and reporting.

- (3) The permittee shall review and update the operating manual at least annually. *[R307-401-6(1)[BACT] and 40 CFR 60.1660; DAQE-AN0129010-02 and R307-220-4]*
- (b) All employees with responsibilities that affect how the municipal waste combustion units operate shall complete a plant-specific training course. *[40 CFR 60.1655 and 40 CFR 60.1660; R307-220-4]*
 - (1) Include at least six types of employees.
 - (i) Chief facility operators.
 - (ii) Shift supervisors.
 - (iii) Control room operators.
 - (iv) Ash handlers.
 - (v) Maintenance personnel.
 - (vi) Crane or load handlers.
 - (2) The permittee shall establish a program to review the operating manual in paragraph (a)(2) with people whose responsibilities affect the operation of the municipal waste combustion unit. Complete the initial review by the later of two dates:
 - (i) One year after the effective date of State of Utah plan approval by the EPA.
 - (ii) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.
 - (3) The permittee shall review the operating manual in paragraph (a)(2) with staff annually.

II.B.2.e.1

Monitoring:

Records required for this permit condition will serve as monitoring.

II.B.2.e.2

Recordkeeping

(a) **General**

- (1) The permittee shall comply with the record keeping requirements of provision I.S.1 of this permit.
- (2) The permittee shall keep the operating manual in an easily accessible location at the plant. It shall be available for review or inspection by all employees who must review it and by the Executive Secretary.
- (3) Keep all records listed in (b) below onsite in paper copy or electronic format unless the Executive Secretary approves another format.
- (4) Make all records listed in (b) available for submittal to the Executive Secretary, or for onsite review by an inspector.

(b) **Operator Manual**

The permittee shall keep records of two items:

- (1) Records of reviews for the operating manual in paragraph (a)(2) of this condition. Include three items:
 - (i) Names of persons who have reviewed the operating manual.
 - (ii) Date of the initial review.
 - (iii) Dates of subsequent annual reviews.
- (2) Records of calendar dates. Include the calendar date on each record.

II.B.2.e.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. WES has developed an operating manual for this facility. The manual addresses each of the procedures identified above and includes all information on the basic combustion theory. The manual is reviewed by the plant supervisor annually during the 4th quarter of each year, and is updated as required. All employees responsible for any portion of facility operation are required to complete a training course prior to assuming any duties on site. Copies of the operating manual are in the facility supervisors office and in the control room. Records of annual reviews are kept on site and were reviewed during the inspection.

II.B.2.f

Condition:

(a) **Training**

- (1) Three types of employees shall complete the EPA operator training course [40 CFR 60.1650(a); R307-220-4]:
 - (i) Chief facility operators.
 - (ii) Shift supervisors.
 - (iii) Control room operators.
- (2) These employees shall complete the EPA operator training course by the later of two dates [40 CFR 60.1650(b); R307-220-4]:
 - (i) One year after the effective date of State of Utah plan approval by the EPA.
 - (ii) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.
- (3) The requirement in paragraph (1) of this section does not apply to chief facility operators, shift supervisors, and control room operators who have obtained full certification from the American Society of

Mechanical Engineers on or before the effective date of State of Utah plan approval by the EPA. *[40 CFR 60.1650(c); R307-220-4]*

- (4) The permittee may request that the Executive Secretary waive the requirement in paragraph (1) of this section for chief facility operators, shift supervisors, and control room operators who have obtained provisional certification from the American Society of Mechanical Engineers on or before the effective date of State of Utah plan approval by the EPA. *[40 CFR 60.1650(d); R307-220-4]*

(b) Certification

- (1) Each chief facility operator and shift supervisor shall obtain and keep a current provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in 40 CFR 60.17(h)(1)). *[40 CFR 60.1675(a); R307-220-4]*
- (2) Each chief facility operator and shift supervisor shall have a provisional certification except that, beginning 12 months after the effective date of State of Utah plan approval by the EPA each chief facility operator and shift supervisor who transfers to the municipal waste combustion facility or is hired to work at the municipal waste combustion facility shall have a provisional certification six months after they transfer to the municipal waste combustion unit or six months after they are hired to work at the municipal waste combustion unit. *[R307-401-6(1) [BACT] and 40 CFR 60.1675(b); DAQE-AN0129010-02 and R307-220-4]*:
- (3) Each chief facility operator and shift supervisor shall take one of two actions *[40 CFR 60.1675(c); R307-220-4]*:
 - (i) Obtain a full certification from the American Society of Mechanical Engineers.
 - (ii) Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in 40 CFR 60.17(h)(1)).
- (4) The chief facility operator and shift supervisor shall obtain the full certification or be scheduled to take the certification exam by the later of the following dates *[40 CFR 60.1675(d); R307-220-4]*:
 - (i) 12 months after the effective date of State of Utah plan approval by the EPA.
 - (ii) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

II.B.2.f.1

Monitoring:

Records required for this permit condition will serve as monitoring.

II.B.2.f.2

Recordkeeping

(a) **General**

- (1) The permittee shall comply with the record keeping requirements of provision I.S.1 of this permit.
- (2) Keep all records listed in (b) below onsite in paper copy or electronic format unless the Executive Secretary approves another format.
- (3) Make all records listed in (b) available for submittal to the Executive Secretary, or for onsite review by an inspector.

(b) **Training and Certification**

The permittee shall keep records of four items:

- (1) Records of provisional certifications. Include three items:
 - (i) Names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers.
 - (ii) Dates of the initial provisional certifications.
 - (iii) Documentation showing current provisional certifications.
- (2) Records of full certifications. Include three items:
 - (i) Names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers.
 - (ii) Dates of initial and renewal full certifications.
 - (iii) Documentation showing current full certifications.
- (3) Records showing completion of the EPA operator-training course. Include three items:
 - (i) Names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustion operator-training course.
 - (ii) Dates of completion of the operator-training course.
 - (iii) Documentation showing completion of operator-training course.
- (4) Records of calendar dates. Include the calendar date on each record.

II.B.2.f.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status. In compliance. All chief facility operators, shift supervisors and control room operators have completed the provisional operator certification training course offered by the American Society of Mechanical Engineers. Certifications for each affected employee

are posted on the wall in the control room. All records for training and certification were reviewed on site during this inspection. The EPA does not currently offer an EPA operator-training course.

II.B.2.g

Condition:

- (a) The permittee shall not operate the municipal waste combustion units unless one of four employees is on duty *[R307-401-6(1) [BACT] and 40 CFR 60.1680, DAQE-AN0129010-02 and R307-220-4]*:
 - (1) A fully certified chief facility operator.
 - (2) A provisionally certified chief facility operator who is scheduled, by the deadline specified in condition II.B.2.f.(b).(4) of this permit, to take the full certification exam.
 - (3) A fully certified shift supervisor.
 - (4) A provisionally certified shift supervisor who is scheduled, by the deadline specified in condition II.B.2.f.(b).(4) of this permit, to take the full certification exam.
- (b) If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the municipal waste combustion unit may fulfill the certified operator requirement. After the deadline specified in this permit for full or provisional certification, depending on the length of time that a certified chief facility operator and certified shift supervisor are away, the permittee shall meet one of three criteria *[R307-401-6(1) [BACT] and 40 CFR 60.1685, DAQE-AN0129010-02 and R307-220-4]*:
 - (1) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Executive Secretary.
 - (2) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Executive Secretary. However, the permittee shall record the periods when the certified chief facility operator and certified shift supervisor are offsite and include the information in the annual report as specified in reporting.
 - (3) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Executive Secretary. However, the permittee shall take two actions:

- (i) Notify the Executive Secretary in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is onsite.
- (ii) Submit a status report and corrective action summary to the Executive Secretary every 4 weeks following the initial notification. If the Executive Secretary notifies the permittee that the status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then shall cease operation. If corrective actions are taken in the 90-day period such that the Executive Secretary withdraws the disapproval, municipal waste combustion unit operation may continue.

II.B.2.g.1

Monitoring:

Records required for this permit condition will serve as monitoring.

II.B.2.g.2

Recordkeeping

(a) **General**

- (1) The permittee shall comply with the record keeping requirements of provision I.S.1 of this permit.
- (2) Keep all records listed in (b) below onsite in paper copy or electronic format unless the Executive Secretary approves another format.
- (3) Make all records listed in (b) available for submittal to the Executive Secretary, or for onsite review by an inspector.

(b) **Certified Operators Offsite**

- (1) Records of when a certified operator is temporarily offsite. Include two main items:
 - (i) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite.
 - (ii) When all certified chief facility operators and certified shift supervisors are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items:
 - (A) The notice that all certified persons are offsite.
 - (B) The conditions that cause those people to be offsite.

(C) The corrective actions the permittee is taking to ensure a certified chief facility operator or certified shift supervisor is onsite.

(D) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite.

(2) Records of calendar dates. Include the calendar date on each record.

II.B.2.g.3

Reporting:

(a) **General**

The permittee shall:

(1) Comply with the reporting requirements of Section I of this permit.

(2) Submit an annual report required by section (b) below.

(3) Submit all reports required by section (b) below on paper, postmarked on or before the submittal dates in section (b) below. If the Executive Secretary agrees, the permittee may submit electronic reports.

(4) Keep a copy of all reports required by section (b) below onsite for 5 years.

(b) **Annual Report**

The permittee shall submit the annual report no later than February 1 of each year that follows the calendar year in which the permittee collected the data. In the annual report, the permittee shall include documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.

Status. In compliance. The facility does not operate the MWC units without a certified chief facility operator on site. Records indicated that a certified chief facility operator is on site at all times during MWC operation. WES submitted the annual report required by this condition on January 29, 2003. A copy of the annual report will be placed in the company's source compliance file after a review memo is written by DAQ.

Condition II.B.2.h: **NOTE:** The 9 pages of requirements found in this condition were evaluated during the annual stack test review. The following information is from the stack testing review conducted by DAQ:

Status. In compliance at the time of the last stack test. Stack testing was conducted on September 10-12, 2002. The following information was taken from the DAQ

stack testing review memo dated December 12, 2002 (DAQC-1815-2002). A copy of the review memo is in the source's stack test file.

Notification for stack testing was submitted on August 20, 2002. WES also notified DAQ that the initial report would not be completed within the 180 days specified in this condition. The initial report was due on November 9, 2002, but WES did not receive the stack test report from the laboratory until after that date. The initial report was submitted on November 15, 2002.

The initial visible emission and stack testing was conducted on September 10-12, 2002. No deviations were noted in the review. Stack testing was conducted at 7% O₂ as required by this permit condition. The following table summarizes all stack testing results and parameters required in this condition:

Pollutant/Parameter	unit A Result	Unit B Result	Limit
Dioxin/furan ng/dscm	0.8 ng/dscm	1.6 ng/dscm	60
Cd mg/dscm	0.0036mg/dscm	0.0018 mg/dscm	0.040
Pb mg/dscm	0.0579 mg/dscm	0.0202 mg/dscm	0.490
Hg mg/dscm	0.0075 mg/dscm	0.0045 mg/dscm	0.080
PM mg/dscm	2.3 mg/dscm	1.1 mg/dscm	27
HCl ppmdv	17.4 ppmdv	12.6 ppmdv	31
Steam Production	51.0 KPPH	52.4 KPPH	N/A
Precip Inlet Temp	302.0 F	298.4 F	N/A
Ave Carbon Inj. Rate	4.0 lb/hr	4.0 lb/hr	N/A

II.B.2.h

Condition:

- (a) The permittee shall not exceed the emission limits specified in Table 1 of this condition for each Municipal Waste Combustion Unit. *[60.1705(c) of R307-220-4 and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*
- (b) The emission limits of this condition apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction. *[40 CFR 60.1710 and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*
 - (1) Each startup, shutdown, or malfunction shall not last for longer than 3 hours.
 - (2) A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.
 - (3) During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under 40 CFR 60.11(d) apply.

Table 1. Emission Limits – Manual Method Testing^a.

For the following pollutants	The permittee shall meet the following emission limits ^b	Using the following averaging times	And determine compliance by the following methods
1. Organics			
Dioxins/Furans (Total mass basis)	60 nanograms per dry standard cubic meter	3-run average (minimum run duration is 4 hours)	Stack test
2. Metals			
Cadmium	0.040 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test
Lead	0.490 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test

	Mercury	0.080 milligrams per dry standard cubic meter -or- 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)	Stack test
	Opacity	10 percent	Thirty 6-minute averages	Visible emission test
	Particulate Matter^c	27 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test
3.	Acid Gases			
	Hydrogen Chloride	31 parts per million by dry volume -or- 95 percent reduction of potential hydrogen chloride emissions	3-run average (minimum run duration is 1 hour)	Stack test
4.	Other			
	Fugitive Ash	Visible emissions for no more than 5 percent of hourly observation period	Three 1-hour observation periods	Visible emission test

^a Authority and origin of emission limits is 60.1705(c) of R307-220-4 and R307-401-6(1)[BACT] of DAQE-AN0129010-02.

^b All emission limits (except for opacity) are measured at 7 percent oxygen.

^c Particulate matter emission limitation of 40 CFR 60 Subpart E is subsumed by this requirement.

Reviewer comment: This condition applies to each municipal waste combustion unit (I.e., MWCF-1 and -2)

II.B.2.h.1

Monitoring:

The authority of all monitoring requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified. The Permittee shall conduct visible emission/stack testing as follows:

- (1) The permittee shall use results of visible emission/stack tests for dioxins/furans, cadmium, lead, mercury, particulate matter (PM), opacity, hydrogen chloride, and fugitive ash to demonstrate compliance with the emission limits in Table 1 of this condition.
- (2) **Methods**

- (i) Follow Table 2 to establish the sampling location and to determine pollutant concentrations, number of traverse points, individual test methods, and other specific testing requirements for the different pollutants.

Table 2. Requirements for Manual Method Testing

To measure the following pollutants	Use the following methods in appendix A of 40 CFR Part 60 to determine the sampling location	Use the following methods in appendix A of 40 CFR Part 60 to measure pollutant concentration	Also note the following additional information
1. Organics			
Dioxins/ Furans	Method 1	Method 23a	The minimum sampling time shall be 4 hours per test run while the municipal waste combustion unit is operating at full load.
2. Metals			
Cadmium	Method 1	Method 29a	Compliance testing shall be performed while the municipal waste combustion unit is operating at full load.
Lead	Method 1	Method 29a	Compliance testing shall be performed while the municipal waste combustion unit is operating at full load.
Mercury	Method 1	Method 29a	Compliance testing shall be performed while the municipal waste combustion unit is operating at full load.

	Opacity	Method 9	Method 9	3-hour observation period (thirty 6-minute averages). Use Method 9 to determine compliance with the opacity limits.
	Particulate Matter (PM)	Method 1	Method 5 or 29a	The minimum sample volume shall be 1.0 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 ±14 EC. The minimum sampling time is 1 hour.
<hr/>				
3.	Acid Gases^b			
	Hydrogen Chloride	Method 1	Method 26 or 26A ^a	Test runs shall be at least 1 hour long while the municipal waste combustion unit is operating at full load.
<hr/>				
4.	Other^b			
	Fugitive Ash	Method 22	Method 22 (visible emissions)	The three 1-hour observation period shall include periods when the facility transfers fugitive ash from the municipal waste combustion unit to the area where the fugitive ash is stored or loaded into containers or trucks.

^aShall simultaneously measure oxygen using Method 3A or 3B in appendix A of 40 CFR Part 60.

^bUse CEMS to test sulfur dioxide, nitrogen oxide, and carbon monoxide. Stack tests are not required except for 40 CFR 60 Appendix F quality assurance requirements.

- (ii) The stack tests for all the pollutants shall consist of at least three test runs, as specified in 40 CFR 60.8. Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the applicable emission limits in Table 1 of this condition.

- (iii) Obtain an oxygen measurement at the same time as the pollutant measurements to determine diluent gas levels.

(3) Frequency

- (i) Conduct the initial visible emission/stack tests for the dioxins/furans, cadmium, lead, mercury, particulate matter (PM), opacity, hydrogen chloride, and fugitive ash by 180 days after May 13, 2002.
- (ii) Conduct annual visible emission/stack tests for dioxins/furans, cadmium, lead, mercury, particulate matter (PM), opacity, hydrogen chloride, and fugitive ash after the initial visible emission/stack test. Conduct each annual visible emission/stack test no later than 13 months after the previous visible emission/stack test.
- (iii) The permittee can test less often for dioxins/furans emissions if both municipal waste combustion units have demonstrated levels of dioxins/furans emissions less than or equal to 15 nanograms per dry standard cubic meter (total mass) for 2 consecutive years. In this case, the permittee may choose to conduct annual stack tests on only one municipal waste combustion unit per year at the plant. The provision only applies to stack testing for dioxins/furans emissions.

- (A) Conduct the stack test no more than 13 months following a stack test on any municipal waste combustion unit subject to this condition at the plant. Each year, test a different municipal waste combustion unit subject to this condition and test all municipal waste combustion units subject to this condition in a sequence that the permittee determines. Once the permittee determines a testing sequence, it shall not be changed without approval by the Executive Secretary.
- (B) If each annual stack test shows levels of dioxins/furans emissions less than or equal to 15 nanograms per dry standard cubic meter (total mass) the permittee may continue stack tests on only one municipal waste combustion unit subject to this condition per year.
- (C) If any annual stack test indicates levels of dioxins/furans emissions greater than 15 nanograms per dry standard cubic meter (total mass) conduct subsequent annual stack tests on both municipal waste combustion units subject to this condition at the plant. The permittee may return to testing one municipal waste combustion unit subject to this condition per year if the permittee can demonstrate dioxins/furans emissions levels less than or equal to 15 nanograms per dry standard cubic meter (total mass) for both municipal waste combustion units at the plant subject to this condition for 2 consecutive years.

- (iv) The permittee may not deviate from the 13-month testing schedules specified in paragraphs (3)(ii) and (3)(iii)(A) of this section unless the permittee applies to the Executive Secretary for an alternative schedule, and the Executive Secretary approves the request for alternate scheduling prior to the date on which the permittee would otherwise have been required to conduct the next stack test.

(4) Calculations

- (i) Use the following equations to calculate emission levels at 7 percent oxygen, the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. See the individual test methods in Table 2 of monitoring for other required equations.

Correct any pollutant concentration to 7 percent oxygen using equation 1:

$$C7\% = C_{unc} * (13.9) * (1/(20.9 - C_{O_2})) \quad (\text{Eq. 1})$$

Where:

$C7\%$ = concentration corrected to 7 percent oxygen.

C_{unc} = uncorrected pollutant concentration.

C_{O_2} = concentration of oxygen (percent).

Calculate the percent reduction in potential mercury emissions (%PHg) using equation 2:

$$\%PHg = (E_i - E_o) * (100/E_i) \quad (\text{Eq. 2})$$

Where:

%PHg = percent reduction of potential mercury emissions

E_i = mercury emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

E_o = mercury emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

Calculate the percent reduction in potential hydrogen chloride emissions (%PHCl) using equation 3:

$$\%PHCl = (E_i - E_o) * (100/E_i) \quad (\text{Eq. 3})$$

Where:

%PHC1 = percent reduction of the potential hydrogen chloride emissions

E_i = hydrogen chloride emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

E_o = hydrogen chloride emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis.

(5) Notification

- (i) At least 30 days prior to conducting any emission testing, the permittee shall notify the Executive Secretary of the date, time and place of such testing and, if determined necessary by the Executive Secretary, the permittee shall attend a pretest conference. [R307-165-2, 40 CFR 60.8(d) and 60.7(a)(6); R307-165 and R307-220-4]

(6) Test Conditions

- (i) All tests shall be conducted while the source is operating at the maximum production or combustion rate at which such source will be operated. During the tests, the source shall burn fuels or combustion of fuels, use raw materials, and maintain process conditions representative of normal operations, and shall operate under such other relevant conditions as the Executive Secretary shall specify. [R307-165-3 and 40 CFR 60.8(c); R307-165 and R307-220-4]
- (ii) Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test. [R307-165-4 and 40 CFR 60.8(c); R307-165 and R307-220-4]
- (iii) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8 unless one of the following conditions apply. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under 40 CFR 60.8, the permittee shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Executive Secretary of the rescheduled date. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under 40 CFR 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being

made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of 40 CFR 60 . Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The permittee of an affected facility shall make available, upon request by the Executive Secretary, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. [40 CFR 60.11(e)(1); R307-220-4]

II.B.2.h.2

Recordkeeping:

The authority of all recordkeeping requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified.

(a) General

- (1) The permittee shall comply with the record keeping requirements of provision I.S.1 of this permit.
- (2) Keep all records listed in (b) below onsite in paper copy or electronic format unless the Executive Secretary approves another format.
- (3) Make all records listed in (b) available for submittal to the Executive Secretary, or for onsite review by an inspector.
- (4) The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the municipal waste combustors; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR 60.7(b); R307-220-4]

(b) Visible Emission/Stack Test

For visible emission/stack tests required under this condition, the permittee shall keep records of four items:

- (1) The results of the visible emission/stack tests for eight pollutants or parameters recorded in the appropriate units of measure specified in Table 1 of this condition:
 - (i) Dioxins/furans.
 - (ii) Cadmium.
 - (iii) Lead.
 - (iv) Mercury.

- (v) Opacity.
- (vi) Particulate matter.
- (vii) Hydrogen chloride.
- (viii) Fugitive ash.

- (2) Test reports including supporting calculations that document the results of all visible emission/stack tests.
- (3) The maximum demonstrated load of the municipal waste combustion units and maximum temperature at the inlet of the particulate matter control device during all stack tests for dioxins/furans emissions.
- (4) The calendar date of each record.

II.B.2.h.3

Reporting:

The authority of all reporting requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified.

(a) General

The permittee shall:

- (1) Comply with the reporting requirements of Section I of this permit.
- (2) As specified in (b) through (d), submit an initial report and annual reports, plus semiannual reports required for any emission or parameter level that does not meet the limits specified in this condition.
- (3) Submit all reports required by sections (b) through (d) below on paper, postmarked on or before the submittal dates in sections (b) through (d) below. If the Executive Secretary agrees, the permittee may submit electronic reports.
- (4) Keep a copy of all reports required by sections (b) through (d) below onsite for 5 years.

(b) Initial Report

The permittee shall submit the initial report by 180 days after May 13, 2002. It should be noted that the initial visible emission/stack test must also be conducted by 180 days after May 13, 2002 (see Monitoring). The permittee shall include three items in the initial report:

- (1) The results of the initial visible emission/stack tests for eight pollutants or parameters:
 - (i) Dioxins/furans.
 - (ii) Cadmium.

- (iii) Lead.
- (iv) Mercury.
- (v) Opacity.
- (vi) Particulate matter.
- (vii) Hydrogen chloride.
- (viii) Fugitive ash.

- (2) The test report that documents the initial visible emission/stack tests including supporting calculations.
- (3) The permittee shall record the COM monitoring data produced during the initial performance test required by 40 CFR 60.8 and shall furnish the Executive Secretary a written report of the COM monitoring results along with Method 9 and 40 CFR 60.8 performance test results. [40 CFR 60.11(e)(4); R307-220-4]

(c) Annual Report

The permittee shall submit the annual report no later than February 1 of each year that follows the calendar year in which the permittee collected the data.

The permittee shall include four items in the annual report:

- (1) The results of the annual visible emission/stack test, using appropriate units, for eight pollutants, as recorded under record keeping (b)(1):

- (i) Dioxins/furans.
- (ii) Cadmium.
- (iii) Lead
- (iv) Mercury.
- (v) Opacity.
- (vi) Particulate matter.
- (vii) Hydrogen chloride.
- (viii) Fugitive ash.

- (2) A notice of intention to begin a reduced stack-testing schedule for dioxins/furans emissions during the following calendar year if the permittee is eligible for alternative scheduling.
- (3) A summary of any emission level that did not meet the limits specified in this condition.
- (4) A summary of the data in paragraph (1) of this section from the year preceding the reporting year which gives the Executive Secretary a summary of the performance of the municipal waste combustion unit over a 2-year period.

(d) Semi-Annual Out-of-Compliance Report

- (1) The permittee shall submit a semiannual report on any recorded emission level that does not meet the requirements specified in this condition.
- (2) For data collected during the first half of a calendar year, the permittee shall submit the semiannual report by August 1 of that year.
- (3) For data the permittee collected during the second half of the calendar year, the permittee shall submit the semiannual report by February 1 of the following year.
- (4) In the semiannual report, the permittee shall include a copy of the test report that documents the emission levels and the corrective actions, if the results of the annual visible emission/stack tests show emissions above the limits specified in Table 1 of this condition as applicable for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

II.B.2.i

Condition:

- (a) The permittee shall not exceed the emission limits specified in Table 3 of this condition for each Municipal Waste Combustion Unit. *[60.1705(c) of R307-220-4 and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*
- (b) The emission limits of this condition apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction. *[40 CFR 60.1710 and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*
 - (1) Each startup, shutdown, or malfunction shall not last for longer than 3 hours.
 - (2) A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.
 - (3) During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under 40 CFR 60.11(d) apply.

Table 3. Emission Limits – Continuous Monitoring^a.

For the following pollutants	The permittee shall meet the following emission limits ^b	Using the following averaging times	And determine compliance by the following methods
1. Acid Gases			

Sulfur Dioxide	31 parts per million by dry volume	24-hour daily block geometric average concentration ^c	Continuous emission monitoring system
Nitrogen Oxides	350 parts per million by dry volume	24-hour daily block arithmetic average concentration	Continuous emission monitoring system
2. Other			
Carbon Monoxide	100 parts per million by dry volume	<u>Prior to 1-Year After State of Utah Plan Approval:</u> 24-hour daily block geometric average concentration ^c <u>On and After 1-Year After State of Utah Plan Approval:</u> 4-hour block arithmetic average concentration	Continuous emission monitoring system
Opacity	10 percent	Thirty 6-minute averages	Method 9 as described in the previous condition ^d

a Authority and origin of emission limits is 60.1705(c) of R307-220-4 and R307-401-6(1)[BACT] of DAQE-AN0129010-02.

b All emission limits except opacity are measured at 7 percent oxygen.

c For the definition of 24-hour geometric averaging, see Equation 19-20a in 40 CFR 60, Appendix A, Method 19, page 1018.

d A continuous opacity monitoring system (COMS) must also be installed and operational as described in this condition. The data obtained from the COMS are not used to determine compliance with the opacity limit. However, the permittee must take corrective action, as described in this condition, when a 6-minute COMS reading exceeds the opacity limit in Table 3.

Reviewer comment: This condition applies to each municipal waste combustion unit (I.e., MWCF-1 and -2)

II.B.2.i.1

Monitoring:

The authority of all monitoring requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified. The permittee shall conduct emission and opacity monitoring as follows:

- (1) The permittee shall use data from the continuous emission monitoring systems (CEMSs) for sulfur dioxide, nitrogen oxides, and carbon monoxide to demonstrate continuous compliance with the applicable emission limits specified in Table 3 of this condition. The data obtained from the continuous opacity monitoring system (COMS) are not used to determine compliance with the opacity limit.

(2) No person shall tamper with a continuous monitoring system (CMS).
[R307-170-5(6); R307-170]

(3) **Methods/Location**

- (i) Install, calibrate, maintain, and operate CEMSs for oxygen, sulfur dioxide, carbon monoxide and nitrogen oxides, and a COMS. Install the CEMSs for sulfur dioxide, nitrogen oxides, and oxygen at the outlet of the air pollution control device.
- (ii) Monitor the oxygen concentration at each location where the permittee monitors sulfur dioxide, carbon monoxide, and nitrogen oxides.
- (iii) All CMSs shall be installed and operational. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b); R307-220-4]
- (iv) All CMSs shall be installed such that representative measurements of emissions from the affected facility are obtained. Additional procedures for location of CMSs contained in the applicable Performance Specifications of 40 CFR 60, Appendix B shall be used. [40 CFR 60.13(f); R307-220-4]
- (v) Each CMS shall be installed, operated, maintained, and calibrated in accordance with applicable performance specifications found in 40 CFR 60 Appendix B and Appendix F, as applicable. [R307-170-5(4); R307-170]

(4) **Performance Evaluation**

- (i) As specified below, conduct initial, daily, quarterly, and annual evaluations of the CEMSs and COMS.

(ii) *Initial and Annual Evaluations*

- (A) Complete the initial evaluation of the CEMSs and COMS within 180 days after May 13, 2002.
- (B) Conduct annual evaluations of the CEMSs and COMS no more than 13 months after the previous evaluation was conducted.
- (C) The permittee shall conduct the initial and annual evaluations of the COMS and CEMSs during the initial and annual stack tests required under this permit or within 30 days thereafter in accordance with the applicable performance specification in

appendix B of 40 CFR 60 and listed in Table 5. [40 CFR 60.13(c); R307-220-4]

(D) For the initial and annual evaluations, collect data concurrently (or within 30 to 60 minutes) using the oxygen, sulfur dioxide, nitrogen oxides, and carbon monoxide CEMSs, and the appropriate test methods specified in Table 4 of monitoring. Collect the data during each initial and annual evaluation of the CEMSs following the applicable performance specifications in appendix B of 40 CFR Part 60. Table 5 of monitoring shows the performance specifications that apply to each CEMS.

Table 4. Requirements for Validating Continuous Emission Monitoring Systems (CEMS)

For the following continuous emission monitoring systems		Use the following methods in appendix A of 40 CFR Part 60 to validate pollutant concentration levels	Use the following methods in appendix A of 40 CFR Part 60 to measure oxygen
1.	Nitrogen Oxides	Method 7, 7A, 7B, 7C, 7D, or 7E	Method 3 or 3A
2.	Sulfur Dioxide	Method 6 or 6C	Method 3 or 3A
3.	Carbon Monoxide	Method 10, 10A, or 10B	Method 3 or 3A

Table 5. Requirements for Continuous Emission and Opacity Monitoring Systems

For the following pollutants	Use the following span values for the CEMS	Use the following performance specifications in appendix B of 40 CFR Part 60 for the CEMS	If needed to meet minimum data requirements, use the following alternate methods in appendix A of 40 CFR Part 60 to collect data
1. Opacity	100 percent opacity	P.S. 1	Method 9

2. Nitrogen Oxides	Control device outlet: 125 percent of the maximum expected hourly potential nitrogen oxides emissions of the municipal waste combustion unit	P.S. 2	Method 7E
3. Sulfur Dioxide	Control device outlet: 50 percent of the maximum expected hourly potential sulfur dioxide emissions of the municipal waste combustion unit	P.S. 2	Method 6C
4. Carbon Monoxide	125 percent of the maximum expected hourly potential carbon monoxide emissions of the municipal waste combustion unit	P.S. 4A	Method 10 with alternative interference trap
5. Oxygen	25 percent oxygen	P.S. 3	Method 3A or 3B

(iii) Daily and Quarterly Evaluations

- (A) Follow the quality assurance procedures in Procedure 1 of appendix F of 40 CFR Part 60 for each CEMS.
- (B) Evaluate the CEMSs daily and quarterly as specified in appendix F of 40 CFR Part 60.
- (C) Use the required span values and applicable performance specifications in Table 5 of monitoring.
- (D) The permittee shall document each CEMS out-of-control period in the state electronic data report as described in reporting. [R307-170-5(2); R307-170]
- (E) Each CEMS shall be configured so that calibration gas can be introduced at or as near to the probe inlet as possible. The permittee shall conduct daily calibration zero drift and span drift checks and cylinder gas audits by flowing calibration gases at the probe inlet, or as near to the probe inlet as possible. Daily calibration drift checks and quarterly cylinder gas audit data shall be recorded by the CEMS electronically to a strip chart

recorder, data logger, or data recording devices. [R307-170-5(5); R307-170]

- (F) *Quarterly Evaluations.* Each CEMS shall be audited at least once each calendar quarter. Successive quarterly audits shall be conducted at least two months apart. A relative accuracy test audit shall be conducted at least once every four calendar quarters as described in the applicable performance specification of 40 CFR 60, Appendix B. [R307-170-7(1), (3), and (4); R307-170]

1. Relative accuracy shall be determined in units of the applicable emission limit.
2. An alternative relative accuracy test (cylinder gas audit or relative accuracy audit) may be conducted in three of the four calendar quarters in place of conducting a relative accuracy test audit, but in no more than three quarters in succession.
3. Each range of a dual range monitor shall be audited using an alternative relative accuracy audit procedure.
4. Minor deviations from the reference method test must be submitted to the Executive Secretary for approval.
5. Performance specification tests and audits shall be conducted so that the entire CMS is concurrently tested.
6. *Audit Procedure.* The permittee may stop a relative accuracy test audit before the commencement of the fourth run to perform repairs or adjustments on the CEMS. If the audit is stopped to make repairs or adjustments the audit must be started again from the beginning. If the fourth test run is started, testing shall be conducted until the completion of the ninth acceptable test run or the source may declare the monitor out-of-control and stop the test. If the system does not meet its applicable relative accuracy performance specification outlined in 40 CFR 60, Appendix B, its data may not be used in determining emissions rates until the system is successfully recertified.
7. *Performance Specification Tests.*

- i. Except as listed in (ii) below, all reference method testing equipment shall be totally independent of the CEMS equipment undergoing a performance specification test.

ii. Reference method tests conducted on fuel gas lines, vapor recovery units, or other equipment as approved by the Executive Secretary may use a common probe, when the reference method sample line ties into the continuous emission monitor's probe or sample line as close to the probe inlet as possible.

(G) Daily Evaluations

1. The permittee shall automatically check the zero (or low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) CEMS calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit of the applicable performance specification in appendix B of 40 CFR 60. The system shall allow the amount of the excess zero and span drift to be recorded and quantified whenever specified. [40 CFR 60.13(d); R307-220-4]

2. The permittee shall automatically, intrinsic to the opacity monitor, check the zero and upscale (span) calibration drifts of the COMS at least once daily. For a particular COMS, the acceptable range of zero and upscale calibration materials is as defined in the applicable version of PS-1 in appendix B of 40 CFR 60. For COMSs measuring opacity of emissions not using automatic zero adjustments, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments. For systems using automatic zero adjustments, the optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

Unless otherwise approved by the Executive Secretary, the following procedures shall be followed for a COMS. Minimum procedures shall include an automated method for producing a simulated zero opacity condition and an upscale opacity condition using a certified neutral density filter or other related technique to produce a known obstruction of the light beam. Such procedures shall provide a system check of all active analyzer internal optics with power or curvature, all active electronic circuitry including the light source and photodetector assembly, and electronic or electro-mechanical systems and hardware and or software used during normal measurement operation. [40 CFR 60.13(d); R307-220-4]

3. The zero and span drifts shall be determined by using raw CMS responses to a known value of the reference standard. Computer enhancements may be used to correct CMS emission data which has been altered by monitor drift, but may not be used to determine daily zero and span drift. [R307-170-7(6); R307-170]

i. A monitor used for compliance which fails the daily calibration drift test as outlined in 40 CFR 60 Appendix F, Subpart 4, shall be declared out-of-control, and the out-of-control period shall be documented in the state electronic data report. The permittee shall make corrective adjustments to the system promptly. CEMS data collected during the out-of-control period may not be used for monitor availability.

ii. Each source operating a CMS which exceeds the calibration drift limit as outlined in 40 CFR 60 and the applicable performance specification shall make corrective adjustments promptly.

(5) Frequency

(i) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CMSs shall be in continuous operation and shall meet minimum frequency of operation requirements as follows [40 CFR 60.13(e); R307-220-4]:

(A) All CMSs for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(B) All CMSs for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(ii) When minimum emission data points are collected by the CMS as required in paragraph (i), quality assurance calibration and maintenance activities shall not count against monitor availability. [R307-170-5(1)(a); R307-170]

(iii) A monitor's unavailability due to calibration checks, zero and span checks, or adjustments required in 40 CFR 60.13 or R307-170 will not be considered a violation of R307-170. [R307-170-5(1)(b); R307-170]

(iv) Monitor unavailability due to CMS breakdowns will not be considered a violation of R307-170 provided that the permittee

- demonstrates, to the satisfaction of the Executive Secretary, that the malfunction was unavoidable and is being repaired as expeditiously as possible. [R307-170-5(1)(c); R307-170]
- (v) The permittee may conduct alternative sampling as listed in Table 5 or as approved in writing by the Executive Secretary to supplement monitor availability requirements. [R307-170-5(1)(d); R307-170]
- (vi) Each source shall monitor and record all emissions data during all phases of source operations, including start-ups, shutdowns, and process malfunctions. [R307-170-5(2); R307-170]

(6) Calculations

- (i) Where CEMSs are required, obtain 1-hour arithmetic averages. The averages for sulfur dioxide, nitrogen oxides, and carbon monoxide shall be expressed in parts per million by dry volume at 7 percent oxygen. Use the 1-hour averages of oxygen data from the CEMS to determine the actual oxygen level and to calculate emissions at 7 percent oxygen.
- (ii) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.
- (iii) Obtain valid 1-hour averages for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.
- (iv) If the permittee does not obtain the minimum data required in paragraphs (i) through (iii) of this section, the permittee shall use all valid data from the CEMSs in calculating emission concentrations in accordance with paragraphs (viii) through (xi) of this section.
- (v) If the permittee does not obtain the minimum data required in paragraphs (i) through (iii) of this section, the permittee is in violation of the data collection requirement regardless of the emission level monitored, and the permittee shall notify the Executive Secretary according to paragraph (e)(3) of reporting.
- (vi) The permittee shall reduce all COM data to 6-minute averages. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. [40 CFR 60.13(h); R307-220-4]

(vii) Data recorded during periods of continuous system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this section. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O₂ or ng of pollutant per J of heat input). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in this condition. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in this condition to specify the emission limit (e.g., rounded to the nearest 1 percent opacity). [40 CFR 60.13(h); R307-220-4]

(viii) Use the following equation to calculate emissions at 7 percent oxygen.

$$C_{7\%} = C_{unc} * (13.9) * (1/(20.9 - C_{O_2}))$$

Where:

C_{7%} = concentration corrected to 7 percent oxygen.

C_{unc} = uncorrected pollutant concentration.

C_{O₂} = concentration of oxygen (percent).

(ix) Use EPA Reference Method 19 in appendix A of 40 CFR Part 60, section 4.3, to calculate the daily geometric average concentrations of sulfur dioxide and carbon monoxide emissions (as applicable).

(x) Use EPA Reference Method 19 in appendix A of 40 CFR Part 60, section 4.1, to calculate the daily arithmetic average for concentrations of nitrogen oxides.

(xi) Use EPA Reference Method 19 in appendix A of 40 CFR Part 60, section 4.1, to calculate the 4-hour block averages for concentrations of carbon monoxide.

(7) Notification

(i) The permittee shall furnish the Executive Secretary written notification or, if acceptable to both the Executive Secretary and the permittee, electronic notification, as follows [40 CFR 60.7(a)(5); R307-220-4]:

(A) A notification of the date upon which demonstration of the CMS performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

- (ii) The permittee shall notify the Executive Secretary of its intention to conduct a relative accuracy test audit by submitting a pretest protocol or by scheduling a pretest conference if directed to do so by the Executive Secretary. The permittee shall notify the Executive Secretary no less than 45 days prior to testing. [R307-170-7(2); R307-170]

II.B.2.i.2

Recordkeeping:

The authority of all recordkeeping requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified.

(a) General

- (1) The permittee shall comply with the record keeping requirements of provision I.S.1 of this permit.
- (2) Keep all records listed in (b) below onsite in paper copy or electronic format unless the Executive Secretary approves another format.
- (3) Make all records listed in (b) available for submittal to the Executive Secretary, or for onsite review by an inspector.
- (4) The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the municipal waste combustors; any malfunction of the air pollution control equipment; or any periods during which a CMS or monitoring device is inoperative. [40 CFR 60.7(b); R307-220-4]
- (5) The permittee shall comply with the record keeping requirements of R307-170-8 as given in section (c) below except that the records will be retained for at least five years as required by provision I.S.1 of this permit. [R307-170-8 and 60.7(f); R307-170 and R307-220-4]

(b) State Plan Records for MWC Units

The permittee shall keep records of seven items.

- (1) Records of monitoring data. Document four parameters measured using CMSs:
 - (i) All 6-minute average levels of opacity.
 - (ii) All 1-hour average concentrations of sulfur dioxide emissions.
 - (iii) All 1-hour average concentrations of nitrogen oxides emissions.
 - (iv) All 1-hour average concentrations of carbon monoxide emissions.
- (2) Records of average concentrations. Document three parameters:

- (i) All 24-hour daily block geometric average concentrations of sulfur dioxide emissions.
- (ii) All 24-hour daily arithmetic average concentrations of nitrogen oxides emissions.
- (iii) All 4-hour block arithmetic and 24-hour daily block geometric average concentrations of carbon monoxide emissions.

(3) Records of exceedances. Document three items:

- (i) Calendar dates whenever any of the three pollutant levels recorded in paragraph (2) of this section or the opacity level recorded in paragraph (1)(i) of this section did not meet the emission limits specified in this condition.
- (ii) Reasons the permittee exceeded the applicable emission limits.
- (iii) Corrective actions the permittee took, or is taking, to meet the emission limits.

(4) Records of minimum data. Document three items:

- (i) Calendar dates for which the permittee did not collect the minimum amount of data required under monitoring (6)(i to iv). Record those dates for three pollutants:

- (A) Sulfur dioxide emissions.
- (B) Nitrogen oxides emissions.
- (C) Carbon monoxide emissions.

- (ii) Reasons the permittee did not collect the minimum data.
- (iii) Corrective actions the permittee took or is taking to obtain the required amount of data.

(5) Records of exclusions. Document each time the permittee has excluded data from the calculation of averages for any of the following three pollutants and the reasons the data were excluded:

- (i) Sulfur dioxide emissions.
- (ii) Nitrogen oxides emissions.
- (iii) Carbon monoxide emissions.

(6) Records of drift and accuracy. Document the results of the daily drift tests and quarterly accuracy determinations according to Procedure 1 of appendix F of 40 CFR Part 60. Keep those records for the sulfur dioxide, nitrogen oxides, and carbon monoxide CEMSs.

(7) Records of calendar dates. Include the calendar date on each record.

(c) CMS Records Under R307-170-8

The permittee shall maintain a file of all:

- (1) parameters for each CMS and monitoring device,
- (2) performance test measurements,
- (3) CMS performance evaluations,
- (4) CMS or monitoring device calibration checks,
- (5) adjustments and maintenance conducted on these systems or devices, and
- (6) all other information required by R307-170.

Information shall be recorded in a permanent form suitable for inspection. The file shall be retained for at least five years (as required by provision I.S.1) following the date of such measurements, maintenance, reports, and records, and shall be available to the Executive Secretary at any time.

II.B.2.i.3

Reporting:

The authority of all reporting requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified.

(a) General

The permittee shall:

- (1) Comply with the reporting requirements of Section I of this permit. For the purposes condition I.S.2.c, prompt for this condition shall be defined as written notification by January 30, April 30, July 30, and October 30 for any deviations which occurred during the quarter which ended 30 days earlier.
- (2) Comply with the reporting requirements of 307-170-7(5) and R307-170-9 as given in sections (b) and (c) below.
- (3) As specified in (d) through (f), submit an initial report and annual reports, plus semiannual reports required for any emission level that does not meet the limits specified in this condition.
- (4) Submit all reports required by sections (d) through (f) below on paper, postmarked on or before the submittal dates in sections (d) through (f) below. If the Executive Secretary agrees, the permittee may submit electronic reports.
- (5) Keep a copy of all reports required by sections (d) through (f) below onsite for 5 years.

(b) Submittal of Audit Results. [R307-170-7(5) ; R307-170]

The permittee shall submit all relative accuracy performance specification test reports to the Executive Secretary no later than 60 days after completion of the test.

- (1) Test reports shall include all raw reference method calibration data, raw reference method emission data with date and time stamps, and raw source continuous monitoring data with date and time stamps. All data shall be reported in concentration and units of the applicable emission limit.
- (2) Relative accuracy performance specification test or audit reports shall include the company name, plant manager's name, mailing address, phone number, environmental contact's name, the monitor manufacturer, the model and serial number, the monitor range, and its location.

(c) State Electronic Data Report. [R307-170-9 and 40 CFR 60.7(c and d); R307-170 and R307-220-4]

(1) *General Reporting Requirements.*

- (i) The permittee shall submit the state electronic data report (SEDR) including all information specified in (2) through (9) below. The permittee shall submit a complete, unmodified report in an electronic ASCII format specified by the Executive Secretary.

(ii) Partial Reports.

(A) If the total duration of excess emissions during the reporting period is less than one percent of the total operating time and the CMS downtime is less than five percent of the total operating time, only the summary portion of the SEDR need be submitted.

(B) If the total excess emission during the reporting period is equal to or greater than one percent of the total operating time, or the total monitored downtime is equal to or greater than five percent of the total operating time, the total SEDR shall be submitted.

- (iii) *Frequency of Reporting.* The permittee shall submit a SEDR quarterly by January 30, April 30, July 30, and October 30 for the quarter ending 30 days earlier.

- (2) *Source Information.* The SEDR shall contain source information including the company name, name of manager or responsible official, mailing address, AIRS number, phone number, environmental contact name, each source required to install a

monitoring system, quarter or quarters covered by the report, year, and the operating time for each source.

- (3) *CMS Information.* The SEDR shall identify each channel, manufacturer, model number, serial number, monitor span, installation dates and whether the monitor is located in the stack or duct.

(4) *Monitor Availability Reporting.*

- (i) The SEDR shall include all periods that the pollutant concentration exceeded the span of the CMS by source, channel, start date and time, and end date and time.
- (ii) Each CMS outage or malfunction which occurs during source operation shall be reported by source, channel, start date and time, and end date and time.
- (iii) Alternative sampling methods provided in Table 5 of monitoring or other methods approved in writing by the Executive Secretary may be used to supplement monitor availability and shall be reported by source, channel, start date and time, and end date and time, and may be used to offset monitor unavailability.
- (iv) Monitor modifications shall be reported by source, channel, date of modification, whether a support document was submitted, and the reason for the modification.

(5) *CMS Performance Specification Audits.*

- (i) The permittee shall submit the results of each relative accuracy test audit, relative accuracy audit and cylinder gas audit. If the permittee reports linearity tests, the permittee may omit reporting cylinder gas audits.
- (ii) Each relative accuracy test audit shall be reported by source, channel, date of the most current relative accuracy test audit, date of the preceding relative accuracy test audit, number of months between relative accuracy test audits, units of applicable standard, average continuous emissions monitor response during testing, average reference method value, relative accuracy, and whether the continuous emissions monitor passed or failed the test or audit.
- (iii) A relative accuracy audit shall be reported by source, channel, date of audit, continuous emissions monitor response, relative accuracy audit response, percent precision, pass or fail results, and whether the monitor range is high or low.

- (iv) Cylinder gas audit and linearity tests shall be reported by source, channel, date, audit point number, cylinder identification, cylinder expiration date, type of certification, units of measurement, continuous emissions monitor response, cylinder concentration, percent precision, pass or fail results, and whether the monitor range is high or low.

(6) *Summary reports.*

- (i) The permittee shall summarize and report each CMS outage that occurred during the reporting period in the CMS performance summary report. The summary must include the source, channels, monitor downtime as a percent of the total source operating hours, total monitor downtime, hours of monitor malfunction, hours of non-monitor malfunction, hours of quality assurance calibrations, and hours of other known and unknown causes of monitor downtime. If the permittee operates a backup CMS, the permittee must account for monitor unavailability only when accurate emission data are not being collected by either CMS.
- (ii) The summary report shall contain a summary of excess emissions which occurred during the reporting period.

(A) Each source with multiple emission limitations per channel being monitored shall summarize excess emissions for each emission limitation.

(B) The emission summary must include the source, channels, total hours of excess emissions as a percent of the total source operating hours, hours of start-up and shutdown, hours of control equipments problems, hours of process problems, hours of other known and unknown causes, emission limitation, units of measurement, and emission limitation averaging period.

- (iii) When no continuous monitoring unavailability or excess emissions have occurred, this shall be documented by placing a zero under each appropriate heading.

(7) *Excess Emissions Report.*

- (i) The magnitude and duration of all excess emissions shall be reported on an hourly basis in the excess emissions report.

(A) The duration of excess emissions based on block averages shall be reported in terms of hours over which the emissions were averaged. The permittee shall average opacity over a six minute

block and shall report the duration of excess opacity in tenths of an hour.

(B) If the permittee has multiple emission limitations per channel being monitored, the permittee shall report the magnitude of excess emissions for each emission limitation.

(ii) Each period of excess emissions that occurs shall be reported. Each episode of excess emission shall be accompanied with a reason code and action code which links the excess emission to a specific description which describes the events of the episode.

(8) *Signed Statement.* The permittee shall submit a signed statement acknowledging under penalties of law that all information contained in the report is truthful and accurate, and is a complete record of all monitoring related events which occurred during the reporting period.

(9) *Descriptions.* The permittee shall submit a narrative description explaining each event of monitor unavailability or excess emissions. Each description also shall be accompanied with reason codes and action codes that will link descriptions to events reported in the monitoring information and excess emission report.

(d) Initial Report

The permittee shall submit the initial report by 180 days after May 13, 2002. It should be noted that the initial evaluation must also be completed by 180 days after May 13, 2002 (see Monitoring). The permittee shall include three items in the initial report:

(1) The emission levels measured on the date of the initial evaluation of the CEMSs for all of the following three pollutants as recorded in accordance with record keeping (b)(2).

- (i) The 24-hour daily geometric average concentration of sulfur dioxide emissions.
- (ii) The 24-hour daily arithmetic average concentration of nitrogen oxides emissions.
- (iii) The 4-hour block arithmetic or 24-hour daily block geometric average concentration of carbon monoxide emissions, as applicable.

(2) The initial performance evaluation of the CEMSs. Use the applicable performance specifications in appendix B of 40 CFR Part 60 in conducting the evaluation.

(3) The permittee shall record the COM monitoring data produced during the initial performance test required by 40 CFR 60.8 and

shall furnish the Executive Secretary a written report of the COM monitoring results along with Method 9 and 40 CFR 60.8 performance test results. [40 CFR 60.11(e)(4); R307-220-4]

(e) Annual Report

The permittee shall submit the annual report no later than February 1 of each year that follows the calendar year in which the permittee collected the data.

The permittee shall include six items in the annual report:

- (1) A list of the highest average levels recorded, in the appropriate units. List those values for three pollutants:
 - (i) Sulfur dioxide emissions.
 - (ii) Nitrogen oxides emissions.
 - (iii) Carbon monoxide emissions.
- (2) The highest 6-minute opacity level measured. Base the value on all 6-minute average opacity levels recorded by the continuous opacity monitoring system.
- (3) The total number of days that the permittee did not obtain the minimum number of hours of data for three pollutants. Include the reasons the permittee did not obtain the data and corrective actions that the permittee have taken to obtain the data in the future. Include data on:
 - (i) Sulfur dioxide emissions.
 - (ii) Nitrogen oxides emissions.
 - (iii) Carbon monoxide emissions.
- (4) The number of hours the permittee has excluded data from the calculation of average levels (include the reasons for excluding it). Include data for three pollutants:
 - (i) Sulfur dioxide emissions.
 - (ii) Nitrogen oxides emissions.
 - (iii) Carbon monoxide emissions.
- (5) A summary of any emission level that did not meet the limits specified in this condition.
- (6) A summary of the data in paragraphs (1) and (2) of this section from the year preceding the reporting year which gives the Executive Secretary a summary of the performance of the municipal waste combustion unit over a 2-year period.

(f) Semi-Annual Out-of-Compliance Report

- (1) The permittee shall submit a semiannual report on any recorded emission level that does not meet the requirements specified in this condition.
- (2) For data collected during the first half of a calendar year, the permittee shall submit the semiannual report by August 1 of that year.
- (3) For data the permittee collected during the second half of the calendar year, the permittee shall submit the semiannual report by February 1 of the following year.
- (4) The permittee shall include one item in the semiannual report:
 - (i) For any of the following four pollutants that exceeded the limits specified in this condition, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and the corrective actions:
 - (A) Concentration of sulfur dioxide emissions.
 - (B) Concentration of nitrogen oxides emissions.
 - (C) Concentration of carbon monoxide emissions.
 - (D) Average 6-minute opacity level. The data obtained from the continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions.

Condition II.B.i

NOTE: The 17 pages of this condition list the requirements of the DAQ Continuous Emissions Monitoring (CEM) program. All of the requirements are evaluated by DAQ's Norm Erikson. The following information is from Norm's review memos.

Status.

In compliance at the time of the last test. WES has installed CEM systems on units A and B for SO₂, NO_x, CO. A continuous opacity monitor (COM) is also installed on both units. Compliance with 40 CFR 60 Appendix F and UAC R307-170 is determined with an annual Relative Accuracy / Performance Specification Test (RA/PST) and a quarterly review of excess emission reports.

The annual/initial RA/PST was conducted on May 13-14, 2002. The test was audited by DAQ's Norm Erikson. The review memo indicated all CEM systems passed the RA/PST. The review memo is dated May 13, 2002 (DAQC-843-2002). A copy of the memo is in the company's CEM file.

State Electronic Data Reports (SEDR) are submitted by WES quarterly. These quarterly reports are reviewed for compliance by DAQ's Norm Erikson. The most recent review was conducted for the 3rd quarter of 2002. The review memo dated October 17, 2002 (DAQC-1590-2002) indicated compliance with the reporting requirements of UAC R307-170. A copy of the review memo is in the sources CEM file.

All data collected by CEM systems and facility operating systems is recorded and stored electronically by WES. The initial reports and excess emission reports/quarterly reports required by this condition have been submitted and reviewed by DAQ. The annual report and semi annual out of compliance report was submitted on January 29, 2003. A semi annual out of compliance report must also be submitted by August 1 of each year.

Condition:

- (a) The permittee shall not operate the municipal waste combustion unit at loads greater than 110 percent of the maximum demonstrated load of the municipal waste combustion unit (4-hour block average). Maximum demonstrated load of a municipal waste combustion unit means the highest 4-hour block arithmetic average municipal waste combustion unit load achieved during 4 consecutive hours in the course of the most recent dioxins/furans stack test that demonstrates compliance with the applicable emission limit for dioxins/furans specified in this permit. *[40 CFR 60.1690(a) and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*
- (b) The permittee shall not operate the municipal waste combustion unit so that the temperature at the inlet of the particulate matter control device exceeds 17°C above the maximum demonstrated temperature of the particulate matter control device (4-hour block average). Maximum demonstrated temperature of the particulate matter control device means the highest 4-hour block arithmetic average flue gas temperature measured at the inlet of the particulate matter control device during 4 consecutive hours in the course of the most recent stack test for dioxins/furans emissions that demonstrates compliance with the limits specified in this permit. *[40 CFR 60.1690(b) and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*
- (c) The permittee shall maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins/furans or mercury test. *[40 CFR 60.1690(c) and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*
- (d) The permittee shall evaluate total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to the municipal waste combustion plant shall be at or above the required quarterly usage of carbon. Calculate the required quarterly usage of carbon using the following equation *[40 CFR 60.1690(d) and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]*.

$$C = \text{Sum of } (f_i * h_i) \text{ through } n$$

Where:

C = required quarterly carbon usage for the plant in kilograms (or pounds).

f_i = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

h_i = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

n = number of municipal waste combustion units, i , located at the plant.

- (e) The municipal waste combustion unit is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations [40 CFR 60.1690(e) and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02]:
 - (1) During the annual tests for dioxins/furans.
 - (2) During the annual mercury tests (for carbon feed rate requirements only).
 - (3) During the 2 weeks preceding the annual tests for dioxins/furans.
 - (4) During the 2 weeks preceding the annual mercury tests (for carbon feed rate requirements only).
 - (5) Whenever the EPA or Executive Secretary permits the permittee to do any of five activities:
 - (i) Evaluate system performance.
 - (ii) Test new technology or control technologies.
 - (iii) Perform diagnostic testing.
 - (iv) Perform other activities to improve the performance of the municipal waste combustion unit.
 - (v) Perform other activities to advance the state of the art for emission controls for the municipal waste combustion unit.
- (f) The operating requirements of this condition apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction [40 CFR 60.1695(a,b) and R307-401-6(1) [BACT]; R307-220-4 and DAQE-AN0129010-02].
 - (1) Each startup, shutdown, or malfunction shall not last for longer than 3 hours.

Reviewer comment: This condition applies to each municipal waste combustion unit (I.e., MWCF-1 and -2)

II.B.2.j.1

Monitoring:

The authority of all monitoring requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified. The Permittee shall conduct other continuous monitoring as follows:

- (1) **Methods**

- (i) *Municipal Waste Combustion Unit Load.* Install, calibrate, maintain, and operate a steam flow meter or a feed water flow meter and meet five requirements:
 - (A) Continuously measure and record the measurements of steam (or feed water) in kilograms (or pounds) per hour.
 - (B) Calculate the steam (or feed water) flow in 4-hour block averages.
 - (C) Calculate the steam (or feed water) flow rate using the method in "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1—1964 (R1991)," section 4 (incorporated by reference in 40 CFR 60.17(h)(2)).
 - (D) Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters," 6th Edition (1971), chapter 4 (incorporated by reference in 40 CFR 60.17(h)(3)).
 - (E) Before each dioxins/furans stack test, or at least once a year, calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions.
- (ii) *Particulate Matter Control Device Inlet Temperature.* Install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each particulate matter control device.
- (iii) *Carbon Feed Rate.* Select a carbon injection system operating parameter that can be used to calculate carbon feed rate (for example, screw feeder speed).
 - (A) During each dioxins/furans and mercury stack test, determine the average carbon feed rate in kilograms (or pounds) per hour. Also, determine the average operating parameter level that correlates to the carbon feed rate. Establish a relationship between the operating parameter and the carbon feed rate in order to calculate the carbon feed rate based on the operating parameter level.
 - (B) Continuously monitor the selected operating parameter during all periods when the municipal waste combustion unit is operating and combusting waste and calculate the 8-hour block average carbon feed rate in kilograms (or pounds) per hour, based on the selected operating parameter.

When calculating the 8-hour block average, do two things:

- 1. Exclude hours when the municipal waste combustion unit is not operating.
 - 2. Include hours when the municipal waste combustion unit is operating but the carbon feed system is not working correctly.
- (iv) All continuous parametric monitoring systems (CPMSs) and monitoring devices shall be installed and operational. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b); R307-220-4]
 - (v) All CPMSs or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. [40 CFR 60.13(f); R307-220-4]

(2) **Frequency/Calculations**

- (i) Where continuous parameter monitoring systems are used, obtain 1-hour arithmetic averages for three parameters:
 - (A) Load level of the municipal waste combustion unit.
 - (B) Temperature of the flue gases at the inlet of the particulate matter control device.
 - (C) Carbon feed rate.
- (ii) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.
- (iii) Obtain valid 1-hour averages for at least 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.
- (iv) If the permittee does not obtain the minimum data required in paragraphs (i) through (iii) of this section, the permittee is in violation of the data collection requirement, and the permittee shall notify the Executive Secretary according to paragraph (c)(3) of reporting.

II.B.2.j.2

Recordkeeping:

The authority of all recordkeeping requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified.

(a) **General**

- (1) The permittee shall comply with the record keeping requirements of provision I.S.1 of this permit.
- (2) Keep all records listed in (b) below onsite in paper copy or electronic format unless the Executive Secretary approves another format.
- (3) Make all records listed in (b) available for submittal to the Executive Secretary, or for onsite review by an inspector.
- (4) The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the municipal waste combustors; any malfunction of the air pollution control equipment; or any periods during which a CPMS or monitoring device is inoperative. [40 CFR 60.7(b); R307-220-4]

(b) **Continuous Parametric Monitoring Systems**

The permittee shall keep records of seven items.

- (1) Records of monitoring data. Document two parameters measured using CPMSs:
 - (i) All 1-hour average load levels of the municipal waste combustion unit.
 - (ii) All 1-hour average flue gas temperatures at the inlet of the particulate matter control device.
- (2) Records of average monitoring data. Document two parameters:
 - (i) All 4-hour block arithmetic average load levels of the municipal waste combustion unit.
 - (ii) All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device.
- (3) Records of exceedances. Document three items:
 - (i) Calendar dates whenever any of the two parameter levels recorded in paragraph (2) of this section did not meet the operating levels specified in this condition.
 - (ii) Reasons the permittee exceeded the applicable operating levels.
 - (iii) Corrective actions the permittee took, or is taking, to meet the operating levels.
- (4) Records of minimum data. Document three items:
 - (i) Calendar dates for which the permittee did not collect the minimum amount of data required under monitoring paragraph (2). Record those dates for two types of parameters:

- (A) Load levels of the municipal waste combustion unit.
 - (B) Temperatures of the flue gases at the inlet of the particulate matter control device.
 - (ii) Reasons the permittee did not collect the minimum data.
 - (iii) Corrective actions the permittee took or is taking to obtain the required amount of data.
- (5) Records of exclusions. Document each time the permittee has excluded data from the calculation of averages for any of the following two parameters and the reasons the data were excluded:
- (i) Load levels of the municipal waste combustion unit.
 - (ii) Temperatures of the flue gases at the inlet of the particulate matter control device.
- (6) For activated carbon injection, the permittee shall keep records of four items:
- (i) Records of average carbon feed rate. Document five items:
 - (A) Average carbon feed rate in kilograms (or pounds) per hour during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records.
 - (B) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.
 - (C) All 8-hour block average carbon feed rates in kilograms (or pounds) per hour calculated from the monitored operating parameter.
 - (D) Total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. Include supporting documentation.
 - (E) Required quarterly usage of carbon for the municipal waste combustion plant, calculated in accordance with this condition. Include supporting calculations.
 - (ii) Records of low carbon feed rates. Document three items:
 - (A) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate).
 - (B) Reasons for the low carbon feed rates.
 - (C) Corrective actions the permittee took or is taking to meet the 8-hour average carbon feed rate requirement.
 - (iii) Records of minimum carbon feed rate data. Document three items:

- (A) Calendar dates for which the permittee did not collect the minimum amount of carbon feed rate data required under monitoring (2).
- (B) Reasons the permittee did not collect the minimum data.
- (C) Corrective actions the permittee took or is taking to get the required amount of data.
- (iv) Records of exclusions. Document each time the permittee has excluded data from the calculation of average carbon feed rates and the reasons the data were excluded.
- (7) Records of calendar dates. Include the calendar date on each record.

II.B.2.j.3

Reporting:

The authority of all reporting requirements is R307-220-4 and R307-401-6(1)[BACT] unless otherwise specified.

(a) **General**

The permittee shall:

- (1) Comply with the reporting requirements of Section I of this permit.
- (2) As specified in (b) through (d), submit an initial report and annual reports, plus semiannual reports required for any emission or parameter level that does not meet the limits specified in this condition.
- (3) Submit all reports required by sections (b) through (d) below on paper, postmarked on or before the submittal dates in sections (b) through (d) below. If the Executive Secretary agrees, the permittee may submit electronic reports.
- (4) Keep a copy of all reports required by sections (b) through (d) below onsite for 5 years.

(b) **Initial Report**

The permittee shall submit the initial report by 180 days after May 13, 2002. The permittee shall include three items in the initial report:

- (1) The levels measured on the date of the initial evaluation of the CPMSs for the following two parameters as recorded in accordance with record keeping (b)(2).
 - (i) The 4-hour block arithmetic average load level of the municipal waste combustion unit.
 - (ii) The 4-hour block arithmetic average flue gas temperature at the inlet of the particulate matter control device.

- (2) The maximum demonstrated load of the municipal waste combustion unit and the maximum demonstrated temperature of the flue gases at the inlet of the particulate matter control device. Use values established during the initial stack test for dioxins/furans emissions and include supporting calculations.
- (3) The average carbon feed rates that the permittee recorded during the initial stack tests for dioxins/furans and mercury emissions. Include supporting calculations as specified in record keeping (b)(6)(i)(A) and (B).

(c) **Annual Report**

The permittee shall submit the annual report no later than February 1 of each year that follows the calendar year in which the permittee collected the data.

The permittee shall include six items in the annual report:

- (1) A list of the highest average levels recorded, in the appropriate units. List those values for two parameters:
 - (i) Load level of the municipal waste combustion unit.
 - (ii) Temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average).
- (2) For activated carbon, include four records:
 - (i) The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests.
 - (ii) The lowest 8-hour block average carbon feed rate recorded during the year.
 - (iii) The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter.
 - (iv) The required quarterly carbon usage of the municipal waste combustion plant calculated in accordance with this condition.
- (3) The total number of days that the permittee did not obtain the minimum number of hours of data for three parameters. Include the reasons the permittee did not obtain the data and corrective actions that the permittee have taken to obtain the data in the future. Include data on:
 - (i) Load level of the municipal waste combustion unit.
 - (ii) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
 - (iii) Carbon feed rate.
- (4) The number of hours the permittee has excluded data from the calculation of average levels (include the reasons for excluding it). Include data for three parameters:

- (i) Load level of the municipal waste combustion unit.
 - (ii) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
 - (iii) Carbon feed rate.
- (5) A summary of any parameter level that did not meet the limits specified in this condition.
- (6) A summary of the data in paragraphs (1) and (2) of this section from the year preceding the reporting year which gives the Executive Secretary a summary of the performance of the municipal waste combustion unit over a 2-year period.

(d) **Semi-Annual Out-of-Compliance Report**

- (1) The permittee shall submit a semiannual report on any recorded emission or parameter level that does not meet the requirements specified in this condition.
- (2) For data collected during the first half of a calendar year, the permittee shall submit the semiannual report by August 1 of that year.
- (3) For data the permittee collected during the second half of the calendar year, the permittee shall submit the semiannual report by February 1 of the following year.
- (4) The permittee shall include two items in the semiannual report:
 - (i) For any of the following two parameters that exceeded the limits specified in this condition, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and the corrective actions:
 - (A) Load level of the municipal waste combustion unit.
 - (B) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
 - (ii) For activated carbon, include two items:
 - (A) Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test. Include four items:
 - 1. Eight-hour average carbon feed rate.
 - 2. Reasons for occurrences of low carbon feed rates.
 - 3. The corrective actions the permittee has taken to meet the carbon feed rate requirement.

4. The calendar date.

(B) Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. Include five items:

1. Amount of carbon purchased and delivered to the plant.

2. Required quarterly usage of carbon.

3. Reasons for not meeting the required quarterly usage of carbon.

4. The corrective actions the permittee has taken to meet the required quarterly usage of carbon.

5. The calendar date.

Status.

In compliance. The limits established in the most recent compliance test are listed in the status section of condition II.B.2.h of this permit. All operating parameters observed at the time of inspection were within the limits set in the most recent stack test. The following operating parameters were recorded at the time of inspection:

- (a) The steam load was 53.4 kpps on Unit A and 53.4 kpps on Unit B.
- (b) Temperature at the inlet of the ESP was 296⁰ F on Unit A and 205⁰ F on Unit B.
- (c) Carbon feed rate was set at 4.3 lb/hr for both units (this is also the 8 hour block average).
- (d) Carbon usage is calculated using the above equation. Since the carbon feed rate is set above the limit specified in the most recent dioxin/furan test and is constant, the facility will exceed the minimum level of carbon injected per quarter.
- (e) None of the conditions specified in i-v above have occurred at this facility since the Title V permit was issued.
- (f) WES keeps records of all startup, shutdown and malfunction activities on site. Reports are submitted for breakdowns and deviations as required.

Steam flow meters are installed, calibrated and maintained to monitor steam flow continuously as required. 4 hour block averages are electronically monitored.

ESP inlet temperature is continuously monitored and recorded electronically. The carbon feed rate is computer controlled and was set at 4.3 lb/hr for both units at the time of inspection. Maximum steam production levels, ESP inlet temperature levels and carbon feed rate in pounds per hour were established during the most recent stack test and can be found in condition II.B.2.h above. Total carbon purchased and delivered to the facility is also tracked and recorded in a log book. The required quarterly usage is calculated and recorded.

All monitoring devices continuously record the parameters specified above. Records for 1 hour averages of load level and flue gas temperature are recorded electronically. All 4 hour block averages for load level and flue gas temperature are automatically calculated

from the 1 hour averages. Records also include any corrective actions required to maintain or return to the specified operating parameters and are written in the operators log book. All data that is electronically recorded includes a date and time of recording.

The initial report was submitted on November 15, 2002. This report was reviewed along with the September 10-12 , 2002 stack test results. The DAQ review memo is dated December 12, 2002 (DAQC-1815-2002). A copy of the review memo is in the company's stack test file.

The annual report was submitted on January 29, 2003. This report has been reviewed and appears to be complete. A review memo has not yet been written. Copies of the annual report and DAQ review memo will be placed in the source's compliance file when the review is complete.

The semi annual out of compliance report is not due until August 1, 2003.

II.B.3 **Conditions on Diesel-Fired Pump (MWCF-3)**

II.B.3.a **Condition:**

Hours of operation shall be no greater than 208 hours per rolling 12 month period. [Authority granted under R307-401(6) [BACT]; condition originated in DAQE-AN0129010-02]

II.B.3.a.1 **Monitoring:**

By the 15th day of each month, the permittee shall calculate the total hours of operation in the previous 12 months for the affected emission unit. Hours of operation for the affected emission unit shall be determined by an hour meter and/or a log.

II.B.3.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status. In compliance. Records indicated 51 hours of operation during the previous 12 month period of January 1, 2002, through December 31, 2002. This pump is operated for one hour each Friday for testing purposes.

II.B.3.b **Condition:**

Visible emissions shall be no greater than 20 percent opacity except for a period not exceeding 3 minutes in any hour. [Authority granted under R307-201-1(4); condition originated in R307-201]

II.B.3.b.1

Monitoring:

If an affected emission unit is operated during a quarter, an opacity observation of the emission unit shall be performed in the quarter that the emission unit was operated. The opacity observation can be conducted at anytime during the quarter. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.3.b.2

Recordkeeping:

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. Opacity observations are taken during the Friday tests. Written records of the opacity observations are kept in a log book.

II.B.4

Conditions on Landfill (LNF-0)

II.B.4.a

Condition:

- (a) The permittee shall calculate a nonmethane organic compounds (NMOC) emission rate for the landfill using the procedures specified in monitoring. The NMOC emission rate shall be recalculated annually, except as provided in paragraph (b)(1)(i) of reporting. [40 CFR 60.752(b); R307-221]
- (1) If the calculated NMOC emission rate is less than 50 megagrams per year, the permittee shall:
 - (i) Submit an annual emission report to the Executive Secretary, except as provided for in paragraph (b)(1)(i) of reporting; and
 - (ii) Recalculate the NMOC emission rate annually using the procedures specified in (a) of monitoring until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.
- (A) If the NMOC emission rate, upon recalculation required in paragraph (a)(1)(ii), is equal to or greater than 50 megagrams per

year, the permittee shall install a collection and control system in compliance with 40 CFR 60.752(b)(2).

(B) If the landfill is permanently closed, a closure notification shall be submitted to the Executive Secretary as provided for in (d) of reporting.

(2) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the permittee shall:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Executive Secretary within 1 year:

(A) The collection and control system as described in the plan shall meet the design requirements of paragraph 40 CFR 60.752(b)(2)(ii).

(B) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the permittee.

(C) The collection and control system design plan shall either conform with specifications for active collection systems in 40 CFR 60.759 or include a demonstration to the Executive Secretary's satisfaction of the sufficiency of the alternative provisions to 40 CFR 60.759.

(b) The permittee shall install a collection and control system capable of meeting emissions standards in R307-221 within 30 months of the date when the landfill has an emission rate of NMOC of 50 megagrams per year or more. [R307-221-5(2); R307-221]

II.B.4.a.1

Monitoring:

The permittee shall monitor the NMOC emission rate by using the equations in (a) and following the three tier process outlined in (b), (c), and (d).

(a) The permittee shall calculate the NMOC emission rate using either the equation provided in paragraph (a)(1) or the equation provided in paragraph (a)(2). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1) for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(2), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k , 170 cubic meters per megagram for L_O , and 4,000 parts per million by volume as hexane for the C_{NMOC} . For landfills located in

geographical areas with a thirty-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorological site, the k value to be used is 0.02 per year.

- (1) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{\text{NMOC}} = \text{Sum} (2 k L_o M_i (e^{-k t_i})(C_{\text{NMOC}})(3.6 \times 10^{-9})) \text{ of } i \text{ through } n$$

where,

M_{NMOC} =Total NMOC emission rate from the landfill, megagrams per year

k=methane generation rate constant, per year

L_o =methane generation potential, cubic meters per megagram solid waste

M_i =mass of solid waste in the ith section, megagrams

t_i =age of the ith section, years

C_{NMOC} =concentration of NMOC, parts per million by volume as hexane

3.6×10^{-9} =conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

- (2) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{\text{NMOC}} = 2 L_o R (e^{-k c} - e^{-k t}) (C_{\text{NMOC}}) (3.6 \times 10^{-9})$$

Where:

M_{NMOC} =mass emission rate of NMOC, megagrams per year

L_o =methane generation potential, cubic meters per megagram solid waste

R=average annual acceptance rate, megagrams per year

k=methane generation rate constant, per year

t = age of landfill, years

C_{NMOC} =concentration of NMOC, parts per million by volume as hexane

c=time since closure, years; for active landfill c=0 and $e^{-k c}=1$

3.6×10^{-9} =conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

- (b) Tier 1. The permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.
- (1) If the NMOC emission rate calculated in (a) is less than 50 megagrams per year, then the permittee shall submit an emission rate report as provided in paragraph (b)(1) of reporting, and shall recalculate the NMOC mass emission rate annually as required under paragraph (a)(1) of this condition.
 - (2) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the permittee shall either comply with paragraph (a)(2) of this condition, or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in (c).
- (c) Tier 2. The permittee shall determine the NMOC concentration using the following sampling procedure. The permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of Appendix A of 40 CFR 60. Method 18 of Appendix A of 40 CFR 60 may be used to analyze the samples collected by the Method 25 or 25C sampling procedure. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If using Method 18, the permittee must identify all compounds in the sample and, as a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP-42), minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to C_{NMOC} as hexane by multiplying by the ratio of its carbon atoms divided by six. If more than the required number of samples are taken, all samples must be used in the analysis. The permittee must divide the NMOC concentration from Method 25 or 25C of Appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be

collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.

- (1) The permittee shall recalculate the NMOC mass emission rate using the equations provided in (a) and using the average NMOC concentration from the collected samples instead of the default value in the equations provided in (a).
 - (2) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the permittee shall either comply with paragraph (a)(2) of this condition, or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in (d).
 - (3) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the permittee shall submit a periodic estimate of the emission rate report as provided in paragraph (b)(1) of reporting and retest the site-specific NMOC concentration every 5 years using the methods specified in monitoring.
- (d) Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of 40 CFR 60. The permittee shall estimate the NMOC mass emission rate using equations in (a) and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined in (c) instead of the default values provided in (a). The permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.
- (1) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the permittee shall comply with paragraph (a)(2) of this condition.
 - (2) If the NMOC mass emission rate is less than 50 megagrams per year, then the permittee shall submit a periodic emission rate report as provided in paragraph (b)(1) of reporting and shall recalculate the NMOC mass emission rate annually, as provided in paragraph (a)(1) of this condition using the equations in (a) and using the site-specific methane generation rate constant and NMOC concentration obtained in (c). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

II.B.4.a.2

Recordkeeping:

- (a) Except as provided in paragraph (a)(2)(i)(B) of this condition when subject to (a) of this condition, the permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered (a) of this condition, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.
- (b) Results of monitoring shall also be maintained in accordance with provision I.S.1 of this permit.

II.B.4.a.3

Reporting:

Except as provided in paragraph (a)(2)(i)(B) of this condition,

- (a) An amended design capacity report shall be submitted to the Executive Secretary providing notification of any increase in the design capacity of the landfill, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means which results in an increase in the maximum design capacity of the landfill. The amended design capacity report shall be submitted within 90 days of the earliest of the following events:
 - (1) the issuance of an amended operating permit;
 - (2) submittal of application for a solid waste permit under R315-310; or
 - (3) the change in operating procedures which will result in an increase in design capacity.
- (b) The permittee shall submit an NMOC emission rate report to the Executive Secretary initially and annually thereafter, except as provided for in paragraph (b)(1)(i). The Executive Secretary may request such additional information as may be necessary to verify the reported NMOC emission rate.
 - (1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in monitoring.
 - (i) If the estimated NMOC emission rate as reported in the annual report to the Executive Secretary is less than 50 megagrams per year in each of the next 5 consecutive years, the permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided

to the Executive Secretary. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Executive Secretary. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

- (2) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.
- (c) Each permittee subject to the provisions of paragraph (a)(2)(i) of this condition shall submit a collection and control system design plan to the Executive Secretary within 1 year of the first report required under (b) in which the emission rate equals or exceeds 50 megagrams per year, except as follows:
 - (1) If the permittee elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in (c) of monitoring and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.
 - (2) If the permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in (d) of monitoring, and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of (d) of monitoring and the resulting site-specific methane generation rate constant (k) shall be submitted to the Executive Secretary within 1 year of the first calculated emission rate exceeding 50 megagrams per year.
- (d) Each permittee of a landfill shall submit a closure report to the Executive Secretary within 30 days of waste acceptance cessation. The Executive Secretary may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Executive Secretary, no additional wastes may be placed into the

landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

- (e) The permittee shall notify the Executive Secretary of the awarding of contracts for the construction of the collection and control system or the order to purchase components for the system. This notification shall be submitted within 18 months after reporting an NMOC emission equal to or greater than 50 megagrams per year.
- (f) The permittee shall also comply with the reporting requirements of Section I of this permit.

Status. In compliance. WES has submitted the annual NMOC calculations as required. The most recent report indicated 13 tons NMOC without controls. When calculated with the flare the emissions drop to 5 tons. NMOC emissions are submitted with the emissions inventory each April. Emissions are calculated using the equations provided above.

Tier 2 testing was last conducted in 1998. The results indicated NMOC emissions of less than 50 megagrams per year. WES has submitted the annual estimate required for Tier 2 and Tier 3 since 1998. The site specific NMOC concentration will be tested using the above procedures during calendar year 2003.

Up to date, on site records of design capacity, current amount of waste in place and the year by year waste acceptance rate is recorded. WES has not submitted any design capacity reports. All data is maintained and reported as required.

WES has installed a collection and control system which is equipped with a flare to incinerate the captured NMOC emissions.

II.B.5 **Conditions on Diesel-Fired Internal Combustion Engines (LNF-4)**

II.B.5.a **Condition:**

Visible emissions shall be no greater than 20 percent opacity except for a period not exceeding 3 minutes in any hour. [Authority granted under R307-201-1(4); condition originated in DAQE-AN0129010-02]

II.B.5.a.1 **Monitoring:**

If an affected emission unit is operated during a quarter, an opacity observation of the emission unit shall be performed in the quarter that the emission unit was operated. The opacity observation can be conducted at anytime during the quarter. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be

performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.5.a.2

Recordkeeping:

The permittee shall keep a log which includes the location and description of each affected emission unit. For each quarter for each affected emission unit, the log shall include either the date of the opacity observation and if visual emission other than condensed water vapor were observed or a note that the emission unit was not operated. For each observed visual emission other than condensed water vapor the permittee shall record: date and time of visual emission observation, emission unit location and description, time and date of opacity determination, and percent opacity. The records required by this provision and all data required by 40 CFR 60, Appendix A, Method 9 shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.a.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status.

In compliance. These units consist of a 15 hp diesel fired engine that powers a small light plant (generator), 5 hp diesel fired engine that powers a welder, a 30 hp diesel fired engine that powers a compressor and a 300 hp diesel engine that powers a chipper to make yard waste. Opacity surveys are conducted on each engine at least once per quarter. Written records of opacity surveys are kept in a log book. The records appeared to be complete when reviewed during the inspection.

II.B.5.b

Condition:

Hours of operation shall be no greater than 200 hours per rolling 12 month period each except the 300 hp engine shall not exceed 100 hours per rolling 12 month period. [Authority granted under R307-401(6) [BACT]; condition originated in DAQE-AN0129010-02]

II.B.5.b.1

Monitoring:

By the 15th day of each month, the permittee shall calculate the total hours of operation in the previous 12 months for the affected emission unit. Hours of operation for the affected emission unit shall be determined by an hour meter and/or a log.

II.B.5.b.2

Recordkeeping:

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.b.3

Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status. In compliance. Hours of operation are tracked using an hour meter. The meters are read each month and the hours of operation for each piece of equipment are calculated. The hours of operation are summarized in a monthly report from the landfill. The 300 hp chipper had 55 hours of operation during the previous 12 month period of January 1, 2002, through December 31, 2002. The three other engines had less than 30 hours of operation each since the facility began tracking their usage when this Title V permit was issued in October 2002.

II.B.6 Conditions on Landfill Gas-Collection and Control System (LNF-6)

II.B.6.a Condition:

Visible emissions shall be no greater than 20 percent opacity from the enclosed flare. [Authority granted under R307-201-1(2); condition originated in DAQE-AN0129010-02]

II.B.6.a.1 Monitoring:

If an affected emission unit is operated during a quarter, an opacity observation of the emission unit shall be performed in the quarter that the emission unit was operated. The opacity observation can be conducted at anytime during the quarter. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.6.a.2 Recordkeeping:

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.a.3 Reporting:

There are no reporting requirements for this provision except those specified in Section I of this permit.

Status. In compliance. There were no visible emissions observed from the enclosed flare. Quarterly opacity surveys are conducted and recorded in a log book.

II.C. Emissions Trading.
(R307-415-6a(10))

Not applicable to this source.

II.D. **Alternative Operating Scenarios.**

(R307-415-6a(9))

Not applicable to this source.

Section III: PERMIT SHIELD

A permit shield was not granted for any specific requirements.

Section IV: ACID RAIN PROVISIONS.

This source is not subject to Title IV. This section is not applicable.

TITLE V SOURCE: Yes. This was the initial title V compliance inspection.

EMISSION CAP
AND EVALUATION: See condition II.B.2.h for stack testing limitations and
condition II.B.2.i for emissions monitored by CEMs. The
facility is also regulated by throughput limitations in II.B.2.b
and hours of operation in condition II.B.2.a.

EMISSION INVENTORY: The following figures are from the 2000 emissions
inventory:

<u>Pollutant</u>	<u>Tons/yr</u>
PM ₁₀	30.4
NO _x	301.7
SO _x	79.3
CO	52.4
VOC	10.5
HCL	605.0
Ammonia	36.5

SOURCE INSPECTION
SUMMARY EVALUATION:

Both units A and B were operating normally at the time of inspection. All records required by the Title V permit were provided and reviewed on site during the inspection. Annual stack testing and CEM audits have been completed and the results appear to demonstrate compliance with all emission limits. All monitoring was being conducted and records of operating parameters were being recorded as required by this permit.

Previous Enforcement Actions:

02/11/2002: SCAN issued for CO exceedences identified in the annual review for both units A and B.

06/14/2001: NOV issued for exceeding the dioxin/furan emission limit on Unit A during the 03/09/2001 stack test.

04/09/2001: NOV issued for exceeding the dioxin/furan emission limit on Unit A during the 10/14/2000 stack test.

03/14/2001: NOV issued for exceeding the HCL emissions limit on Unit A during the 01/18-22/2001 stack test.

03/02/2000: NOV issued for exceeding the dioxin/furan and Cadmium emission limits on Unit A during the 09/24/1999 stack test.

08/25/1999: SCAN issued for failing to submit signed statement of completeness and accuracy for the 2nd quarter – quarterly report.

07/09/1999: NOV issued for exceeding dioxin/furan emission limit on Unit A during the 09/17/1998 stack test.

10/29/1998: NOV issued for exceeding CO, SO₂ and acid gas control emissions during the 2nd and 3rd quarter of 1998.

06/26/1997: NOV issued for exceeding dioxin/furan emission limit on Unit A during February 1997 and April 1997 stack tests. NOV also included a violation for failing to test for dioxin/furans during calendar year 1996.

Compliance Assistance:

We discussed the visual opacity surveys required on the diesel fired engines at the landfill and emergency generator at the MWC. I recommended a quarterly evaluation during operation after the engine is warmed up, even if it is not operated under load. I showed WES how other Title V sources are recording the information for the visual opacity surveys.

The facility is replacing the shredder at the landfill with a larger unit and was also concerned about the hours of operation limit on the 300 hp engine. I recommended they submit an NOI for the new shredder because it will have a larger diesel fired engine and they want to increase the hours of operation they are allowed to operate it.

No problems were noted during the inspection.

CURRENT

RECOMMENDATIONS:

WES should be considered in compliance with the observed Title V permit conditions at the time of inspection.

HIGH PRIORITY VIOLATOR:

Yes. WES was issued 3 Notices of Violation during 2001. the DAQ and WES entered into a settlement agreement to resolve the violations on February 13, 2002 (DAQC-234-2002). There are 3 supplemental environmental projects WES is currently conducting/funding as part of the settlement. WES will remain on the HPV list until all of the requirements of the above mentioned settlement agreement are fulfilled.

The combustion study conducted by a 3rd party consultant was nearing completion at the time of inspection.

The soil sampling study being is being conducted by a graduate student at the University of Utah was currently under way at the time of inspection.

The household hazardous waste disposal facility was under construction at the time of inspection. WES plans to offer used oil recycling and pesticide recycling at this facility. It should be completed by the spring of 2003.

RECOMMENDATION FOR
NEXT INSPECTION:

Check for a new AO/modified Title V permit.

ATTACHMENTS:

VEO form

INSPECTORS SIGNATURE:
